

Comprehensive TRANSPORTATION PLAN



**Walnut
city Of Creek**

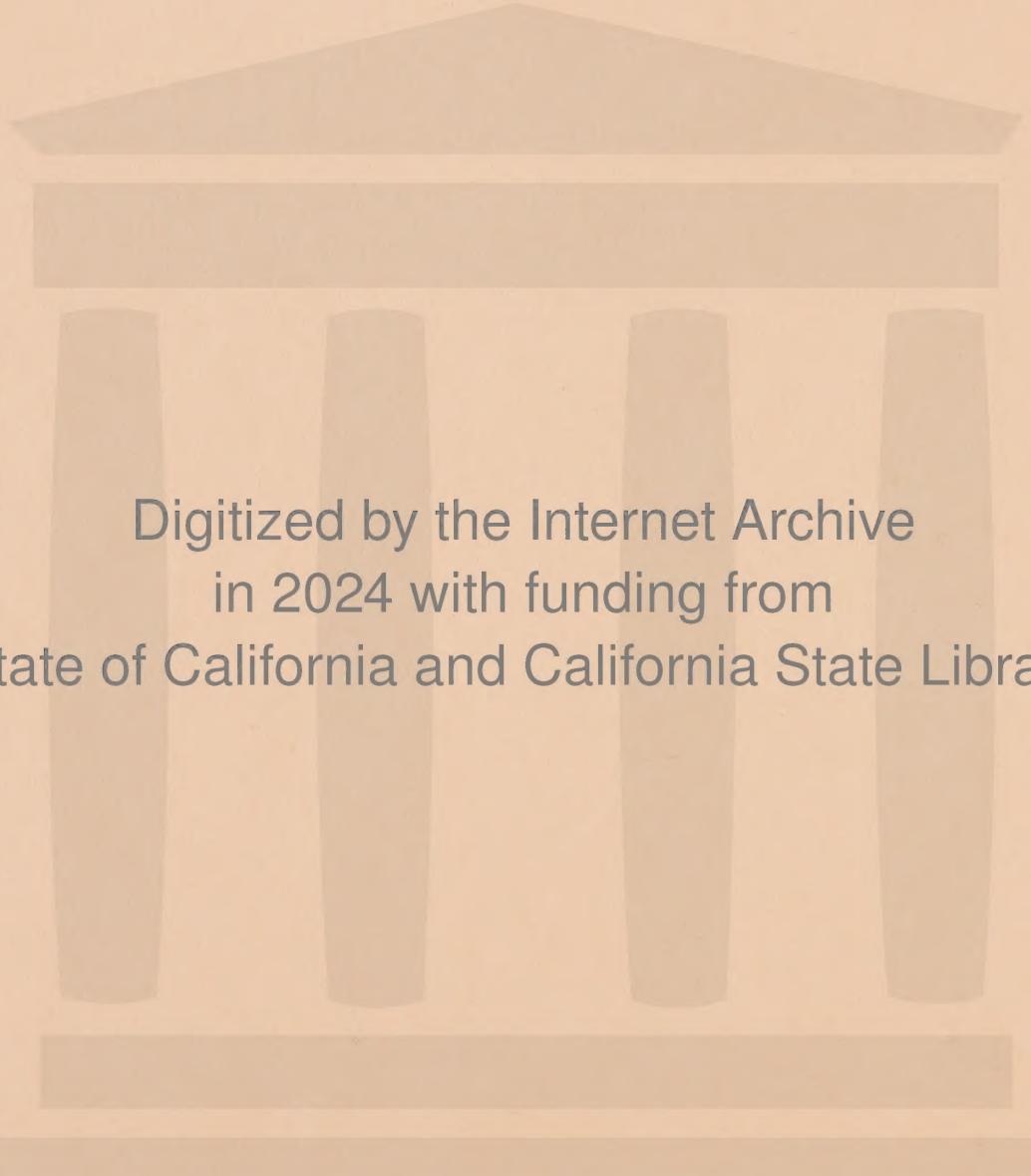
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COMPREHENSIVE TRANSPORTATION PLAN
FOR THE CITY OF WALNUT CREEK

GENERAL PLAN

CIRCULATION ELEMENT

ADOPTED

JULY - 1977

TABLE OF CONTENTS

	<u>PAGE</u>
<u>SUMMARY</u>	1
<u>INTRODUCTION</u>	2
<u>CIRCULATION SYSTEM</u>	
OVERVIEW	4
PROPOSED CIRCULATION SYSTEM	7
FREEWAY ACCESS	9
MAJOR ARTERIAL RECOMMENDATIONS	11
ARTERIAL STREET RECOMMENDATIONS	13
COLLECTOR STREET RECOMMENDATIONS	17
LOCAL STREET RECOMMENDATIONS	20
ROADWAY IMPLEMENTATION	21
ROADWAY ALTERNATIVES CONSIDERED	28
<u>TRANSIT</u>	
OVERVIEW	32
TRANSIT RECOMMENDATIONS	34
SHORT-TERM PROGRAM	34
LONG-TERM PROGRAM	37
IMPLEMENTATION	37
ALTERNATIVES CONSIDERED	38
<u>BIKEWAYS</u>	
OVERVIEW	40
PROPOSED BIKEWAY SYSTEM	40
IMPLEMENTATION	42
ALTERNATIVES	43
<u>PEDESTRIAN WAYS</u>	
OVERVIEW	44
PROPOSED PEDESTRIAN SYSTEM	44
IMPLEMENTATION	47
<u>PARKING AND LOADING</u>	
OVERVIEW	49
PROPOSED PARKING AND LOADING POLICIES	49
IMPLEMENTATION	52
<u>APPENDIX</u>	A-1

FIGURES AND TABLES

	<u>PAGE</u>
FIGURE 1. EXISTING & PROJECTED TRAFFIC VOLUMES	5
FIGURE 2. EXISTING & PROJECTED TRAFFIC VOLUMES - CORE AREA	6
FIGURE 3. EXISTING FREEWAY ACCESS	8
FIGURE 4. PROPOSED FREEWAY ACCESS	10
FIGURE 5. APPROXIMATE ROAD ALIGNMENT FOR YGNACIO VALLEY ROAD BY-PASS	12
FIGURE 6. PROPOSED SOUTH BROADWAY EXTENSION	16
FIGURE 7. EXISTING DOWNTOWN SHUTTLE BUS ROUTE	33
FIGURE 8. PROPOSED MIDDAY TRANSIT ROUTES	35
FIGURE 9. PROPOSED COMMUTE HOUR TRANSIT ROUTES	36
FIGURE 10. PROPOSED AND EXISTING BIKEWAYS	41
FIGURE 11. PROPOSED WALKWAYS	46
FIGURE 12. PATH WITH NO GRADE SEPARATION (SAMPLE PATH)	48
FIGURE 13. PATH WITH MINIMAL GUTTER (SAMPLE PATH)	48
FIGURE 14. EXISTING PUBLIC PARKING FACILITIES	51
FIGURE 15. ADDITIONAL PARKING FACILITIES	51
TABLE 1. SUMMARY OF RECOMMENDED STREET IMPROVEMENT PROJECTS	23
TABLE 2. ARTERIAL STREET STANDARDS	A-1

Summary

1. This Comprehensive Transportation Plan has been developed as a replacement to Walnut Creek's outdated Circulation Element of the General Plan. Once adopted, this document is expected to guide continual public and private improvements of the various transportation system elements within the Walnut Creek area.
2. Commute-hour congestion experienced along Ygnacio, Treat, I-680, and other roadways will continue to increase as new development occurs. Although some minor improvements can be made to these roadways, drivers will have to adjust to an increased level of congestion. Several drastic measures were considered to satisfy projected travel demands, but none were felt to be acceptable from an overall community standpoint.
3. The era in which major roadway improvements can be constructed appears to be ending. With the exception of freeway access improvements, the extension of South Broadway and the Ygnacio bypass, no other arterial or collector streets are proposed. Walnut Creek will have to rely primarily on improvements to the existing street system in order to meet future traffic demands.
4. Transit service for commuters, youths, senior citizens, and the handicapped is needed in the Walnut Creek area. Transit endeavors should be undertaken in incremental stages and periodically reevaluated. Ultimately, a City-wide transit system is desired to satisfy some intra-City travel needs as well as to provide connections to regional transit facilities. Transit service provides potential person carrying capacity that will become increasingly important as automobile mobility becomes more difficult.
5. Improved pedestrian facilities are recommended as a high priority in many sections of the City. Walking is the most basic and natural form of transportation, but it is extremely hazardous in certain areas. Both the City and the County need to take a more aggressive stance on pedestrian-oriented improvements.
6. The continued development of a bikeway system as well as bike parking facilities is recommended throughout the community. Accompanying the bikeways should be a comprehensive program of safety education directed toward drivers and cyclists.
7. Parking in most commercial areas is adequate. As downtown development and redevelopment continues, the City should insure that commensurate parking and loading facilities are provided.

INTRODUCTION

Introduction

Transportation decisions have a tremendous impact on our daily lives and ultimately affect such things as air quality, travel time, resource allocation, community cohesion, the design of our homes and our patterns of human settlement. Collectively, the Walnut Creek community spends about \$100 million per year on transportation. On a per capita basis, City residents spend \$1700 each year for auto, truck, transit and air travel.

Although private parties make the vast majority of the individual transportation expenditures, governmental involvement through the investment of tax funds in transportation improvements, regulation, and planning has an impact on the entire transportation network. Decisions at all levels of government have an impact on the amount of money available for transportation improvements and the uses to which this money is put.

Government Code Section 65302(b) requires a circulation element in all City and County general plans and stipulates that it include "the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals and facilities, all correlated with the land use element of the plan." As a result of development actions and changes in financial and population forecasts, the existing General Plan Circulation Element has become outdated.

This transportation plan has been developed to meet the requirements of the Government Code. In addition it has been expanded to address all transportation modes with which the City is involved. The plan will serve to guide future transportation investments by the City in the development of a multi-modal transportation system.

PURPOSE

The purpose of the Transportation Element of the Walnut Creek General Plan is to:

- A. Identify the goals, objectives and policies concerning the movement of people and goods throughout the community.
- B. Evaluate circulation needs and issues within the City.
- C. Insure that both public and private transportation expenditures are coordinated to efficiently supply circulation needs.
- D. Serve to direct investment in transportation improvements which are compatible with the stated transportation goals of the City.

WHAT IS THE EFFECT OF THE PLAN?

Adoption of this transportation plan will have several short term and long term implications for the City of Walnut Creek, the downtown business community and local residents. One of the first and foremost actions of this plan will be to begin the establishment of priorities for capital expenditures related to transportation. Thus, this plan will help shape the decisions as to where and how the City should spend a major portion of its funds. The uses to which funds are put will determine the degree of congestion in certain sections of the City, the developability of various parcels, safety of travelers and the livability of some neighborhoods.

This plan will also determine the degree of mobility for persons who do not have access to an auto. Decisions regarding transit, bike ways, and pedestrian amenities will significantly affect Walnut Creek's youth, elderly, and non-driving population.

Finally, this plan will affect new development in the City. The standards for roadways, sidewalks, and parking which are outlined in this report will have an effect on the cost of development, parking problems, width of roadways and sidewalks, and character of the City.

GOALS

The general goal developed by the Transportation Commission for this comprehensive transportation plan is:

To develop a coordinated, efficient, safe, and multi-modal transportation program which will enhance the social, economic and environmental climate in Walnut Creek through consideration of all modes of transportation and their relationship to land use.

In the sub-sections of this element the various modes of transportation are discussed. Each mode has been treated as a separate entity with goals and objectives which, taken collectively, serve as a guide for attaining the general transportation goal of the City.

CIRCULATION SYSTEM



Circulation System Overview

In spite of its seemingly random configuration, the local street network in Walnut Creek functions reasonably well with today's traffic. Except for improvements needed to gain freeway access and the inadequate east-west corridor through Ygnacio Valley, relatively few major improvements are needed in the community.

Walnut Creek is at a stage in its evolution where the bulk of the City's land mass is developed in a use that will remain stable for the next few decades. New residential growth (other than Rossmoor) is expected to be confined primarily to "in filling" of vacant or under-utilized parcels within the Planning Area. Non-residential growth within Walnut Creek will stem from office and retail projects both in the Core Area and the Ygnacio Valley office park.

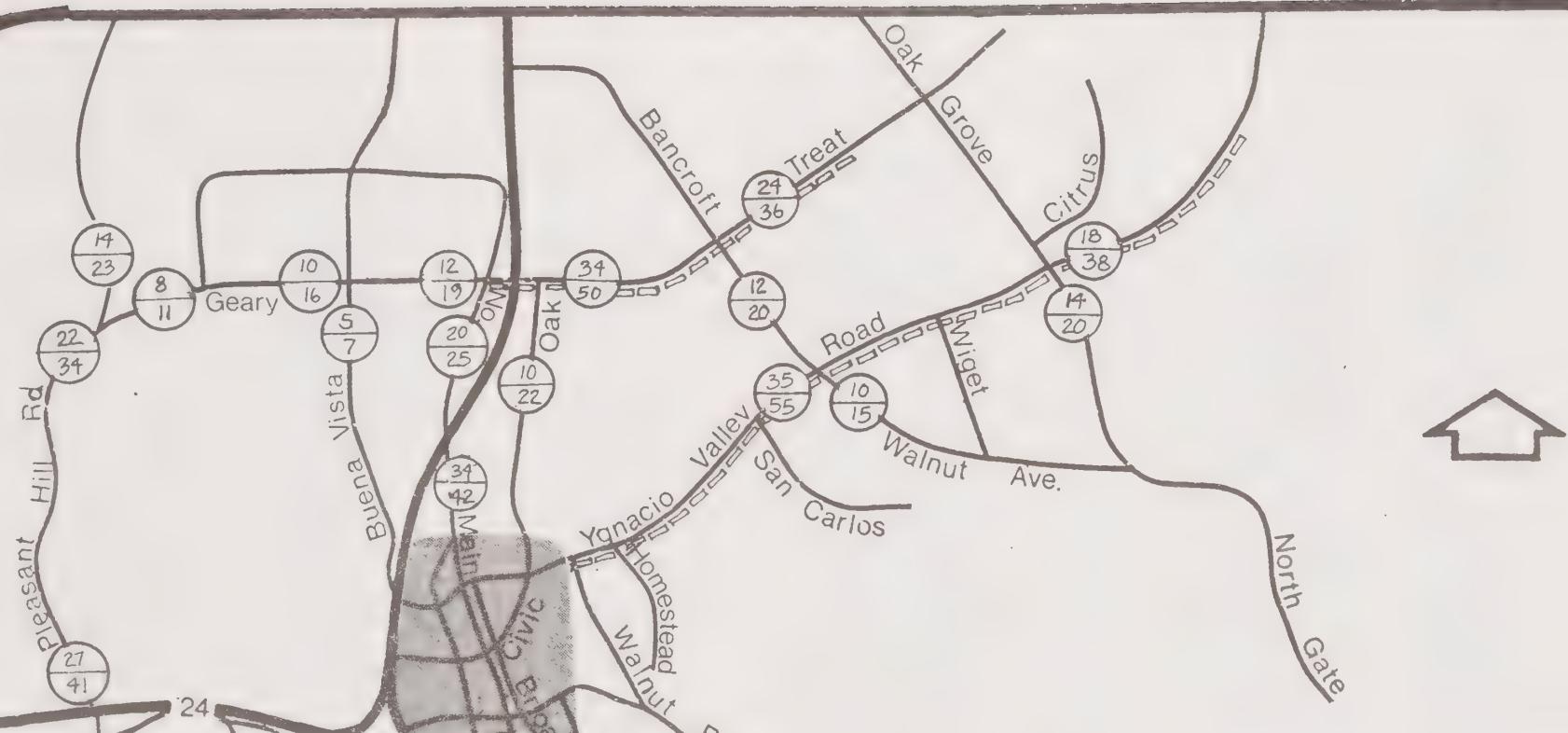
The most significant impact from new growth will not occur from Walnut Creek but will be attributable to developments east or south of the City. Traffic generated from new construction in Clayton, Concord, and the San Ramon Valley will congest Walnut Creek's arterial streets and freeways.

Because development patterns have now been established in most of Walnut Creek, this plan functions as a guide to completing the local street system. The major regional problems which affect the City cannot be solved solely by this plan. Problems such as the congestion of the I-680 corridor, the I-680/24 "Y" interchange, and the inadequate east-west corridors through Ygnacio Valley will require years of work by numerous agencies. This plan does address the smaller corridor improvements which the City can make and still prevent traffic intrusion through neighborhoods.

OUTLOOK FOR STREET IMPROVEMENTS

Although new streets, better access and a more logical street configuration are desired in many parts of the community, the era in which new roadways can be easily constructed has ended. With few exceptions, land use patterns, environmental constraints, and fiscal restrictions dictate that major new roadways are infeasible.

If the recommendations of this plan were compared to the previous circulation element one would discover that several streets have been removed from the plan and a few new streets have been added. The overall reduction in the number of future street improvements included in the plan is the result of less development and lower densities than had been contemplated in the previous General Plan and changing public attitudes relative to roadway improvements.



12 ← 1976 ADT* (in thousands)

16 ← Projected 1990 ADT* (in thousands)

* **ADT** = Average Daily Traffic
(total in both directions)

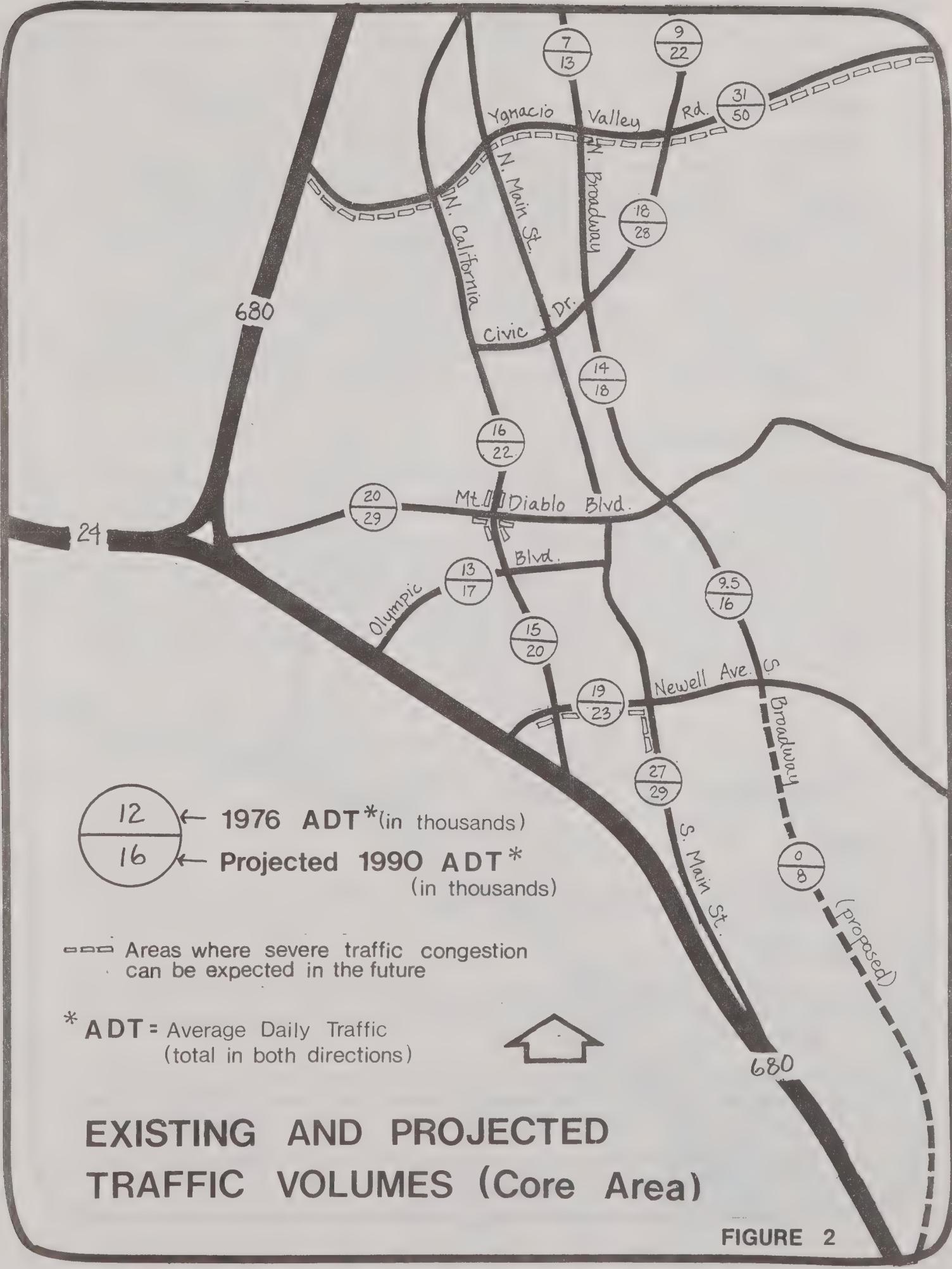
See Figure 2

* See Appendix for details

- Areas where severe traffic congestion can be expected in the future

EXISTING AND PROJECTED TRAFFIC VOLUMES* FIGURE

FIGURE 1



FREEWAY ACCESS

Freeway access in Walnut Creek has been and will continue to be a problem. Ironically, Walnut Creek enjoys the economic benefits of being located at the junction of two freeways, yet drivers from many sections of the City have difficulty getting access to either of these freeways. The location of the I-680-Highway 24 interchange and the corresponding need for weaving distances and acceleration lanes makes it infeasible to have a centrally located set of on and off-ramps accessible to both freeways.

Walnut Creek now has seven "partial" interchanges, none of which provide on and off-ramps to all directions (see Figure 3). Another freeway access problem is that the arterial and collector streets leading to freeways are in need of improvement. Ygnacio, South Main, Newell, and Treat all experience some degree of congestion.

EAST-WEST CIRCULATION PROBLEMS

Prior to 1970, the California State Division of Highways Master Plan illustrated a new freeway extension through the Ygnacio Valley area. After several years of controversy, this freeway route was deleted. Unfortunately, the cities of Walnut Creek and Concord predicated land use patterns on the existence of this freeway to handle east-west traffic. Treat Boulevard and Ygnacio Valley Road are now the only two streets which handle east-west movement from the Ygnacio Valley area to the downtown and I-680. Due to the dominant commute patterns towards San Francisco and the East Bay, and the location of BART Stations, most sections of both Treat Boulevard and Ygnacio Valley Road are now operating near capacity during commute hours.

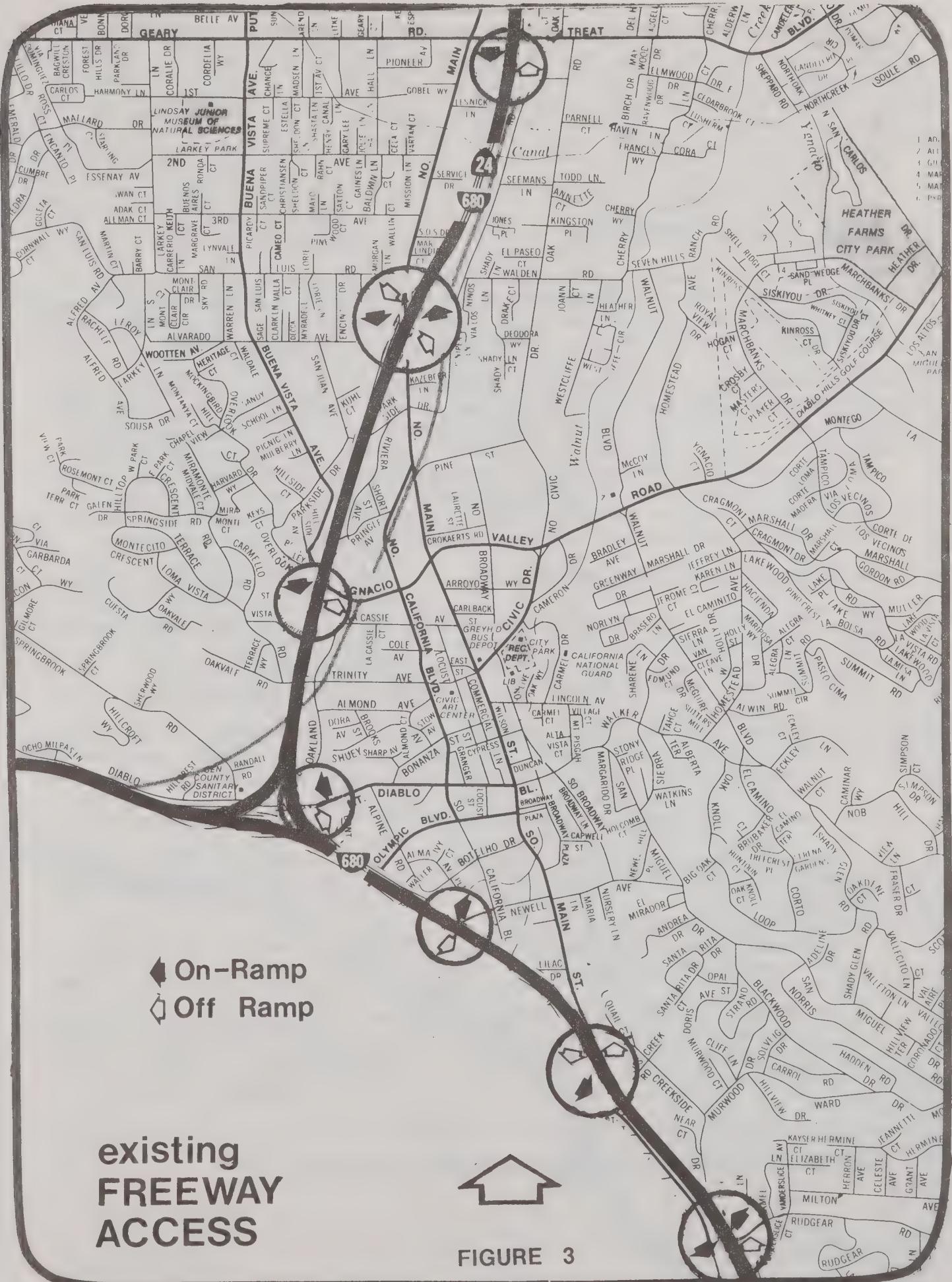
Proposed Circulation System

GOALS

To provide a system of streets, arterials, and freeways that provide for convenient, safe and efficient movement of people and goods.

OBJECTIVES

1. To develop a street system consisting of local streets, collector streets, arterials, and freeways with the function of each roadway recognized and maintained.
2. To continually monitor traffic flow on the street systems and to take corrective action where necessary to improve efficiency, reduce congestion, and correct high accident locations.
3. To protect residential areas from undesired through-traffic and to eliminate traffic conditions not compatible with these areas.



FREEWAY ACCESS RECOMMENDATIONS

The location of freeway access points has a dramatic local impact on land use, economic opportunities, and environmental conditions. In Walnut Creek, freeway ramp location also has regional consequences because of the "Y" interchange and the desire to keep freeway traffic flowing through this interchange.

In order to correct deficiencies in freeway access, careful study must evaluate both the local and regional implications of any change. The Transportation Commission studied the need for better freeway access but has not developed a set of firm recommendations for solutions, pending the result of a corridor study by Caltrans. Caltrans must study the entire corridor rather than merely one proposed interchange since any change will have a "domino" effect on other ramps, freeway traffic flow, and on feeder streets and intersections. Any on or off-ramp alteration must be coordinated with other segments of the system.

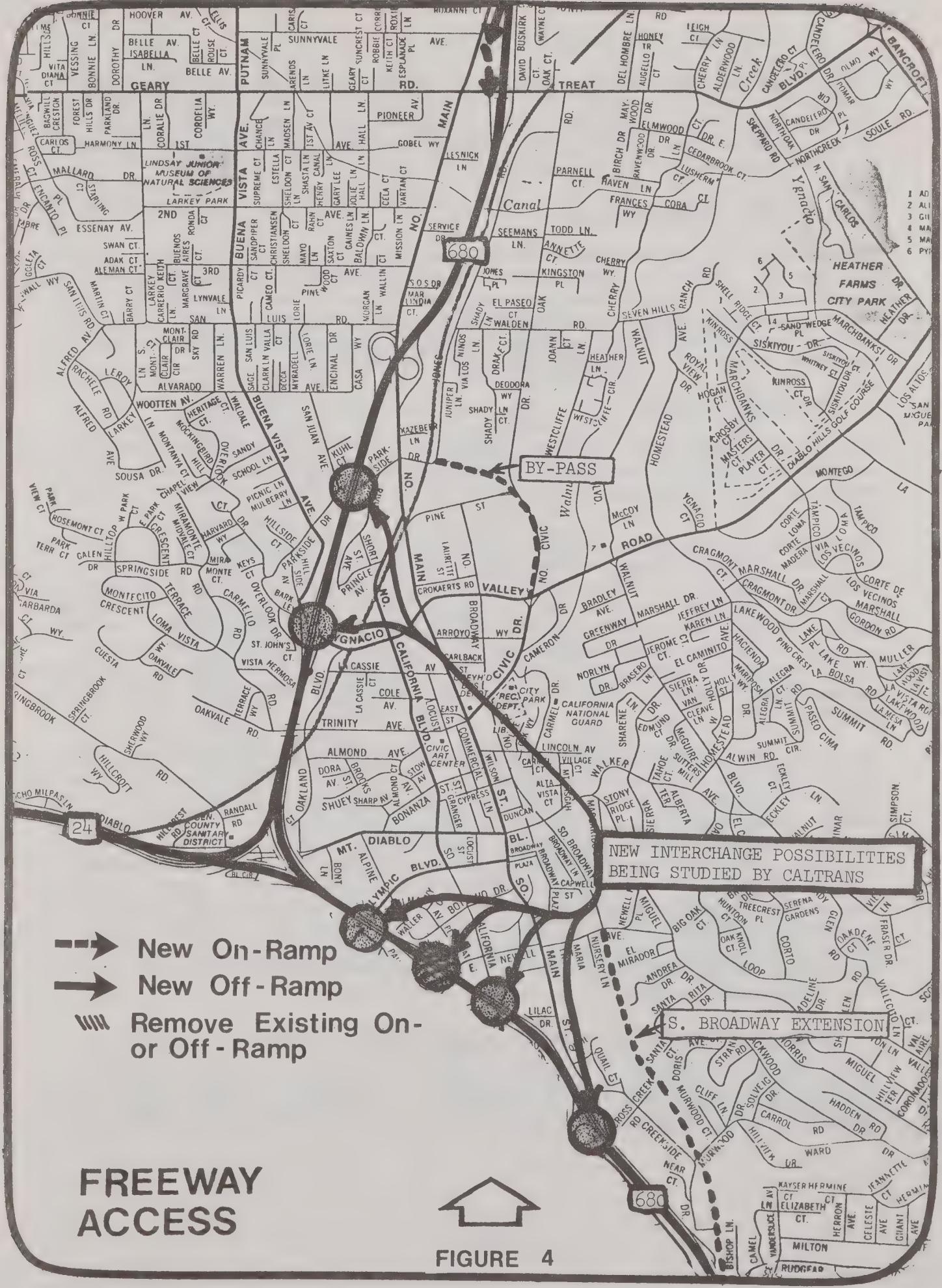
The opportunity to provide better access is complicated by several factors:

1. Available highway funds do not appear sufficient to make any significant freeway changes in the foreseeable future.
2. The environmental impact of any change will be substantial.
3. It has been predicted¹⁾ that the I-680 corridor traffic volumes per lane will soon surpass the per lane traffic volumes experienced prior to the recent widening from four to six lanes. By 1990 (or earlier) projected traffic volumes are expected to be so great that the freeway may be unable to absorb the vehicles which wish to get on the freeway.

It is recommended that the City continue to pursue freeway access and implementation of improvements as funds become available. Actions required include: (see Figure 4.)

1. Complete the Treat-Geary interchange modifications (now scheduled for construction in 1978).
2. Pursue with Caltrans alternatives to improve access to I-680 and Route 24, including possible ramp modifications at Ygnacio Valley Road and I-680 and additional ramps at Parkside Drive and I-680.

1) City of Concord, Land Use and Transportation Study - 1974



3. Retain Mt. Diablo Blvd. ramps.
4. Retain Newell Avenue ramps until replacement ramps are constructed.
5. Pursue with Caltrans various alternatives to provide additional access from south of Walnut Creek. Interchanges at Olympic, California, and Main will each be studied.

MAJOR ARTERIAL RECOMMENDATIONS

The function of a major arterial is to move large volumes of traffic at relatively high speeds. Typically, this street classification varies from four to six lanes in width and prohibits parking, loading, and access to individual properties. The only two transportation corridors which are classified as "major arterials" are the Ygnacio Valley Road and the Pleasant Hill Road-Geary Road-Treat Blvd. corridors. Policies recommended for these roadways are:

1. Ygnacio Valley Road

The central theme of the policies recommended for the Ygnacio Valley Road corridor emphasizes the need to improve the operating efficiency of the roadway, while retaining the existing width.

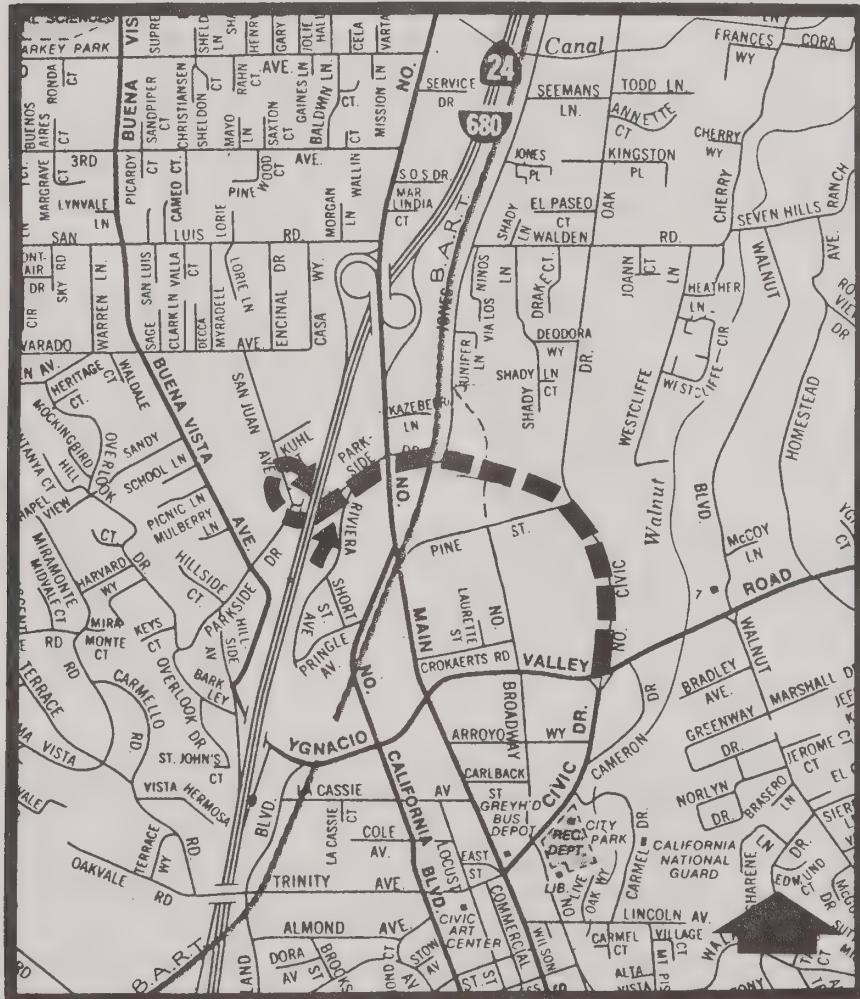
Ygnacio Valley Road will be widened to six lanes between I-680 and Oak Grove Road. As traffic volumes warrant, the efficiency of this six lane arterial should be upgraded by making those capacity improvements that can reasonably be made at critical intersections. It is intended that Ygnacio not be widened beyond six lanes to provide additional capacity. Community tolerance for congestion, primarily during commute hours, will have to increase. Since future traffic demand is expected to exceed capacity, measures such as carpools, transit, staggered work hours and other measures may have to be employed to meet travel demands.

One major new roadway which could provide relief for the portion of Ygnacio between Civic and I-680 is a proposed bypass that would call for the extension of Parkside Drive to connect with Civic Drive and the construction of new ramps at Parkside and I-680. The feasibility of this alternative should be seriously evaluated during the Caltrans study of I-680/Route 24 improvement needs. It is important that, in conjunction with the Caltrans study, the City begin work to prepare a detailed design for the Parkside Drive extension. This design is necessary to allow the City to protect the right-of-way needed for the roadway and to continue to evaluate the feasibility of the project. If the investigation conducted by the City and Caltrans identify the bypass proposal as the best alternative available for relieving traffic congestion on Ygnacio Valley Road and improving freeway access in this area, the City should seek to develop the Parkside Drive bypass.

2. Pleasant Hill Road-Geary Road-Treat Boulevard Corridor

As congestion increases on I-680, Freeway 24, and Ygnacio Valley Road, the Pleasant Hill Road-Geary Road-Treat Boulevard corridor will experience increased traffic volumes. With relatively minor improvements, the corridor will handle

projected traffic volumes. The street section between Buena Vista and I-680 is most critical and should be expanded to four lanes. East of I-680, Treat Boulevard will be widened to six lanes within the Walnut Creek Planning Area. Work on the widening of Treat Boulevard is expected to begin in fiscal year 1978-79. Driveways along Treat should be avoided in order to maintain efficient traffic flow. Similar to the policy for Ygnacio, it is recommended that street widening not exceed six lanes.



APPROXIMATE ROAD ALIGNMENT FOR YGNACIO VALLEY ROAD BY-PASS

FIGURE 5

ARTERIAL STREET RECOMMENDATIONS

Arterial streets along with major arterials typically serve as the network for through traffic flow. These streets connect the various sections of the City and provide access to freeways. They are intended to carry high volumes of traffic and provide a means to divert traffic from neighborhood streets. Arterials can range from two to six lanes.

1. Del Valle Area:

Tice Valley Boulevard: This boulevard functions reasonably well with the existing traffic volumes along the route. As continued development occurs in Rossmoor intersection capacity improvements will be needed at the Tice Valley Boulevard and Olympic Boulevard intersection. Additional safety measures should be pursued on the easterly section of Tice Valley. Although projected traffic volumes do not support widening beyond two lanes east of the Walnut Creek City Limits, improvements to make the street safer are needed. To improve the connection of Tice Valley to I-680, intersection improvements along Meadow Lane, Castle Hill Road and Crest Avenue may be warranted.

Olympic Boulevard: Olympic Boulevard will experience about a 40 percent increase in traffic volume during the next decade or two. It is likely that it will be necessary to widen Olympic to four lanes between Tice Valley and Newell. Widening of Olympic Boulevard between Newell and I-680 to four lanes may be required if, for example, access is established to new development along this section of street.

Rossmoor Parkway: As development in Rossmoor continues, the entry gate facility will need to be revised to add a separate lane for visitors. Ultimately, the intersection of Rossmoor Parkway and Golden Rain Road may need signalization.

2. Ygnacio Valley Area:

Oak Grove Road: Oak Grove Road now carries a high volume of vehicular, bicycle, and pedestrian traffic along this 2, 3 and 4 lane road. The street functions adequately except for peak period congestion at the Ygnacio Valley Road intersection and at the Encina Grande Shopping Center entrance just south of Ygnacio. Traffic volumes are expected to increase 25-30 percent from development both south and north of Ygnacio. The present roadway appears adequate for a reasonable level of traffic flow in the future. Although some peak period congestion will be present at signalized intersections, no major improvements are contemplated along this route.

Bancroft-Walnut Avenue: The Bancroft Road - Walnut Avenue roadway lacks continuity and uniform improvements along this arterial. Several changes are needed to complete this street and to improve traffic flow:

1. The road section between Ygnacio and Treat has intermittent improved and unimproved frontage. As development continues, the roadway will ultimately be widened to its full four lanes throughout its length, with an additional lane for right turns on the southbound approach to Ygnacio Valley Road. A new traffic signal will be installed at the intersection of Banbury Road and Bancroft Road, in conjunction with the development of the property on the north-west corner of Bancroft Road.
2. The segment of Bancroft north of Treat Boulevard has a vertical separation of traffic. The grade of the northbound and southbound lanes differs by a few feet. Although this causes no major problems, the separation should eventually be corrected.
3. The unimproved segment of Walnut Avenue between Autumn Drive and Hutchinson should be improved to conform with the remainder of the street. Some of these improvements can be made in conjunction with the development of properties adjacent to the street.

3. Downtown Walnut Creek:

Civic Drive - Oak Road: South of Walden Road, Civic Drive has been developed as a four-lane street with parking. North of Walden Drive, however, the street is only two lanes with little room for parking or pedestrians. As increased congestion occurs on I-680 and N. Main Street and as higher density residential development occurs in the area, it will be necessary to widen the 2 lane section of Oak Road to four lanes to provide for improved local circulation.

North Main Street (Pine Street to Oak Park Boulevard): Several street improvements are needed along North Main Street:

- a. The intersection of Pine Street, California Boulevard and North Main Street has a series of problems and awkward situations. Because of the overhead crossing of the BART tracks, there is no easy solution to these problems. However, the operations of the intersection should be reviewed to define lower cost intersection modifications which might improve traffic operations and safety at the intersection.
- b. If the Ygnacio Valley Road bypass is constructed to tie into the proposed freeway ramps at I-680, the North Main - Parkside intersection will carry a great deal more traffic than it does today. When this occurs, several improvements will be needed to provide sufficient capacity for the anticipated traffic.

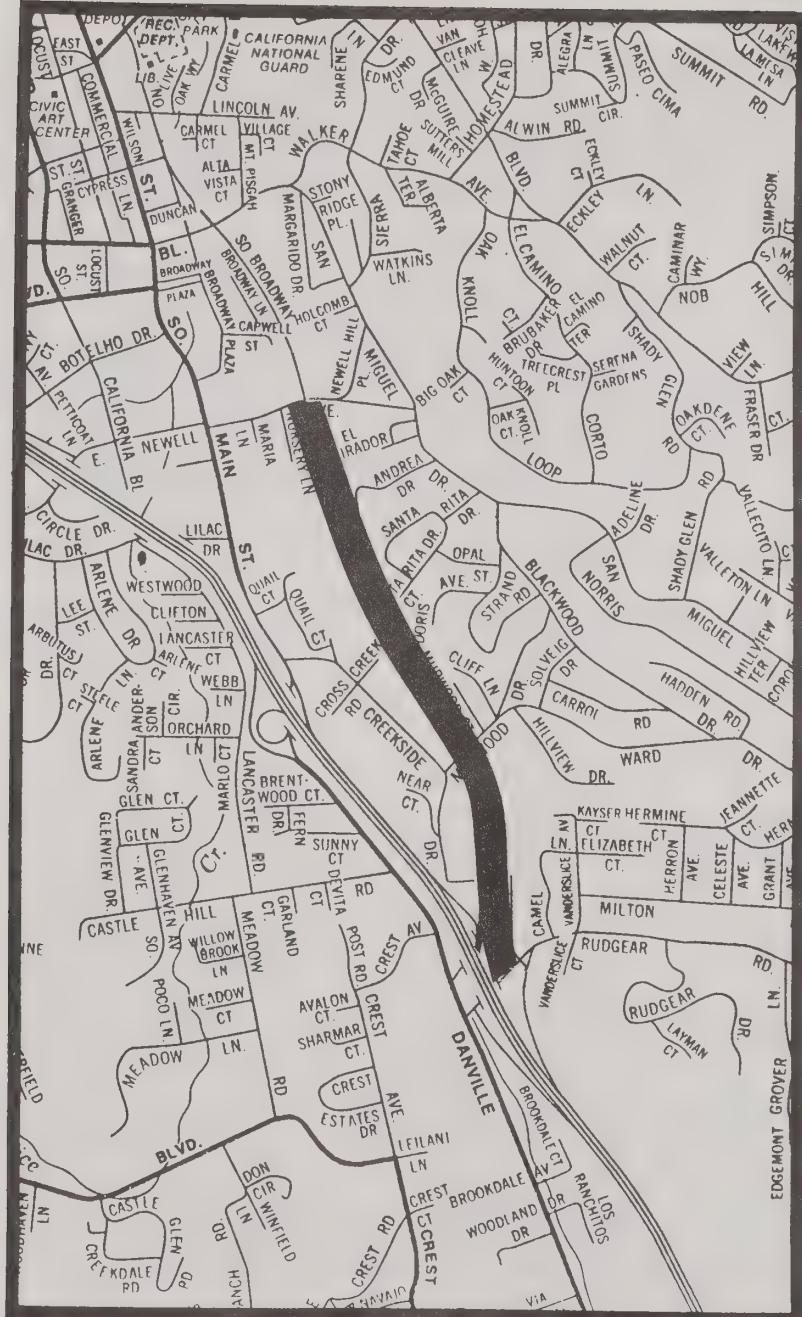
South Main Street: As the sole access to the Core Area from the south, South Main carries high traffic volumes. The effects of future traffic growth on the street can be mitigated in the short-run by intersection improvements at South Main and Newell.

Broadway: North of Ygnacio, Broadway is restricted in width, has on-street parking, and lacks the opportunity for future widening because of the closeness of buildings to the street. These factors reduce the ability of Broadway to function as an efficient North-South arterial street. The proposal to extend Broadway northerly to Parkside will provide needed circulation and access to new developments although considerable congestion is anticipated during evening peak periods. Remaining segments of Broadway function reasonably well and should have sufficient capacity to handle expected traffic volumes.

South Broadway: Due to increased traffic volumes projected to be generated from new developments in the downtown and residential growth south of Walnut Creek, a second southerly access to the Core Area was felt to be needed. An extension of South Broadway along the railroad right-of-way to connect to the Rudge Road/I-680 interchange would meet this need. A two-lane limited access roadway should be sufficient to meet projected travel demands. It is important that the City continue to further evaluate this roadway extension prior to making a final decision to proceed with the acquisition of right-of-way and construction. Further input regarding the cost/benefit of this 7 figure expenditure should be undertaken. Furthermore, the City should continue to monitor the studies being performed by Caltrans to evaluate freeway ramp alternatives. It is expected that this roadway will have some beneficial impacts by relieving some through-traffic on residential streets, such as Homestead and Walnut, and by relieving congestion on South Main Street. Recent noise studies performed by acoustic specialists have indicated that although this roadway will increase existing noise levels along some portions of the right-of-way, most of the adjoining schools and dwellings will meet the noise requirements dictated in the Walnut Creek General Plan and required by State law.

In conjunction with the Caltrans study of alternatives to provide additional southerly access to the Core Area from I-680, the City should prepare a detailed design of the South Broadway extension. The design is necessary to compare alternative schemes for providing the additional access and to select the most effective approach to providing this additional access. If the investigation conducted by the City and Caltrans identify the South Broadway extension as the best alternative for improving the southerly access to the Core Area, the City should seek to develop the extension.

California Boulevard: Although now constricted at its northerly and southerly ends, California is an important Core Area street. As congestion occurs at the Ygnacio Valley ramps, more people will be attracted to the Mt. Diablo ramps via California Blvd. Except for completing the widening of California to six lanes between Mt. Diablo and Botelho



**proposed
S. BROADWAY
EXTENSION**

FIGURE 6

and the potential extension to I-680, no major improvements are recommended.

Newell Avenue (East of I-680): Newell now serves an important function because it serves as an access road to the freeway and also distributes and collects traffic going and coming from the Core Area's North-South arterial streets. Future widenings are not recommended, although minor widenings at California will be necessary to accommodate future traffic.

Mt. Diablo Boulevard: The unimproved portions of Mt. Diablo between Oakland and Locust should be widened to conform to the improved street section. The section of Mt. Diablo between California and Broadway should be limited to four lanes with turn lanes in order to promote conditions compatible with heavy pedestrian traffic. If traffic conditions warrant, parking may have to be prohibited during peak hours between California Boulevard and Oakland Boulevard.

4. Larkey/North Walnut Creek

North Main Street (I-680 to City Limits): The widening of N. Main Street to 4 lanes between the vicinity of I-680 and the northerly City Limits should be accomplished.

5. South Walnut Creek

Livorna Road: Livorna Road is projected to have a three-fold increase in traffic volume as development in the South Walnut Creek area continues. Widening may be required at its intersection with Trotter Way and possibly at Lavender to provide separate left turn lanes. The City and County should also avoid residential frontage along this street. Livorna should be able to remain as a two-lane road although sufficient right-of-way for a four-lane arterial should be maintained in the event traffic volumes exceed those projected.

Rudgear Road: Similar to Livorna, Rudgear Road will experience increased auto use. However, existing development has constricted the opportunity to make significant changes to the road. The major improvement needed is the widening or clearing of an area for pedestrians to walk along the street section between San Miguel Road and Rudgear Estates. Other portions of this two-lane road are satisfactory.

Danville Highway: Danville Highway is expected to function adequately with anticipated traffic levels within Walnut Creek's sphere of influence. No improvements are recommended.

COLLECTOR STREET RECOMMENDATIONS

Collector streets are designed to serve traffic destined between arterials and local streets. Roadways used primarily for traffic movement within residential, commercial, or employment areas may also be categorized as collector streets.

These streets serve a dual purpose by providing a means for local through-traffic within an area and direct access to abutting properties. Hence, provisions should be made to accommodate turning movements, parking, and loading of people and goods. For the most part, collectors are two-lane streets with wider rights of way than other local residential or business streets. In some cases, especially in commercial areas, collector streets may provide four travel lanes.

Collector streets on which no significant improvements are recommended or where no special policies are being enacted include Wiget Lane, Peachwillow, Citrus, Arbolado, North Gate Road, Las Lomas Way, San Carlos Drive, Marchbanks, Montego, Las Juntas, Minert, Cherry Lane, Walden Road, Sunnyvale Avenue, Camino Verde, Springbrook Road, Saranap Avenue, Golden Rain Road, Tice Creek Drive, Crest Avenue, Trotter, Dapplegray, Palmer, Mountain View, Trinity Avenue, Buena Vista, Larkey Lane, San Miguel, and Sunnyvale Avenue.

For other collector streets, the following improvements or policies are recommended:

1. Del Valle Area:

Boulevard Way: Frontage improvements should be completed as development occurs along the commercial section of the street to provide for four traffic lanes, on-street parking, and pedestrian movements. The remaining sections of Boulevard Way which are primarily two lane and quite narrow should undergo needed safety related improvements, but future traffic projections do not appear to warrant widening beyond two lanes.

Rolling Hills Drive: Rolling Hills Drive lies behind the Rossmoor Shopping Center and was designed to serve future expansion of this commercial center. This street should be developed as a four-lane street without parking. No connection should be provided to Magnolia Way.

Newell Avenue (west of I-680): Through-traffic on Newell Avenue should be discouraged and the County should undertake a study of special traffic control measures to minimize conflicts occurring along this street.

2. Ygnacio Valley:

La Casa Via: The improved section of La Casa Via, immediately south of Ygnacio Valley Road, has been developed to its ultimate width. The remaining section of La Casa Via is intended to serve a low density residential area and need not be constructed to the standard of the completed street section. This roadway should ultimately reflect the rural character of the La Casa Via area. No roadway connection of Arbol Via to Fyne Drive should be established although

pedestrian and bicycle access should be instituted (see Page 25 for alternatives considered.)

Snyder Lane: Snyder Lane was intended to serve as a collector street funneling traffic to Walnut Avenue. The unimproved section of Snyder is a private street belonging to adjoining property owners. It is recommended that this street be completely improved and dedicated to the appropriate jurisdiction.

Castle Rock Road: It is recommended that Castle Rock Road not be extended beyond its present terminus of Castle Rock Park. No southerly extension of this road to South Walnut Creek should occur. (See Page 24 for alternatives considered.)

Valley Vista: The only improvement envisioned for Valley Vista Road is the construction of a new bridge over Pine Creek just east of the intersection of Oak Grove Road and Valley Vista.

Cedro Lane: Cedro Lane is fully developed with the exception of a one-block segment adjoining Walnut Acres School. The responsibility for this improvement lies with the School District.

Mitchell Drive - Shadelands Drive: These streets in the E-R District should be completed as outlined in the assessment district agreement recently enacted to provide street and flood control improvements for that area.

Navaronne Way: Illustrated on the Concord General Plan is an extension of Navaronne Way southerly into Walnut Creek. This street is located east of Oak Grove Road and was designed to connect between Treat Boulevard and Ygnacio. Installation of this connection will help provide additional local access between these two east-west corridors.

3. Downtown Walnut Creek:

Creekside Drive: Ultimately, the City should pursue a second access to Creekside Drive. If the South Broadway extension is constructed, a connection should be constructed to allow an emergency access.

Bonanza Street: Bonanza Street and Alpine Road should be realigned to intersect at one common spot along Mt. Diablo Boulevard. This connection should occur when the area redevelops as it may affect land use in that vicinity.

Oakland Boulevard: Between Ygnacio Valley Road and Mt. Diablo Boulevard, Oakland Boulevard will experience increased congestion as traffic on the freeways becomes heavier. Full improvement to collector street standards should be pursued between Trinity and Mount Diablo.

4. Larkey/North Walnut Creek

San Luis Road: San Luis Road should be improved to collector street status by completing frontage improvements between N. Main Street and Buena Vista Avenue.

5. South Walnut Creek:

Walnut Boulevard: Walnut Boulevard needs several minor improvements along the entire street to improve traffic flow and to provide additional safety measures. The drainage ditches prevalent, particularly in the northern section of the street, should be covered. Other segments of the street need various safety improvements, but no widening beyond two lanes is proposed.

Homestead Avenue: The recommended policy of the City is to minimize traffic on Homestead Avenue. At present, Homestead Avenue and Walker Avenue are being used, primarily during commute hours, as a shortcut between downtown and the freeway and Ygnacio Valley. Although no foreseeable means of closing off the street was found, the City should conscientiously avoid any traffic measures which might add additional traffic volumes to Homestead.

Walker Avenue: The 90° curve on Walker Avenue, just east of the Core Area, is awkward for traffic to negotiate, but no reasonable cost alternative was found to straighten the road.

LOCAL STREET RECOMMENDATIONS

Numerous improvements are needed to local streets within the planning area. Since individual local streets do not usually play an important role in the City's overall circulation system, no attempt has been made to evaluate these streets. However, in a few circumstances, local streets were discussed in the planning process because of external factors or changes from previous City policies.

1. Diablo Hills Area: To the north of the Diablo Hills development is a relatively isolated and primarily undeveloped 30-acre section of Ygnacio Valley. This land is illustrated in the General Plan for residential densities of 4-7 dwelling units per acre. Two streets now stub into the area: Seven Hills Ranch Road and Kinross Drive. It is proposed that at the time of development, access should be granted to Kinross, Seven Hills Ranch Road and Candelero. These outlets will help this location gain access to all areas and reduce the impact of extra traffic to any one street. Three street accesses are needed to handle this density. If a less intense use occurs, access and off-site improvements could be reduced.

2. Rossmoor Emergency Access: Rossmoor needs a second access to handle emergency situations. Should the main entrance become blocked or overcrowded in an emergency, a second access would supply an important function. The location of this second access should be instituted most easily near Del Valle High School. Also to be considered are emergency access roads to Lafayette or Alamo. It is the intent that these roads should be available only for emergency use by emergency vehicles, and that these roads should not infringe upon the high level of security provided in the Rossmoor community.

3. Marshall Drive: To improve circulation in the Walnut-Homestead area south of Ygnacio Valley, it is proposed that the City continue to implement the extension of Marshall Drive between Homestead and Walnut. Half the length of this street is already installed. The remaining segment can be constructed at the time the vacant property is developed. This measure will provide additional flexibility for local circulation.
4. Comistas Drive: Comistas Drive was illustrated on the 1971 General Plan Circulation Element as a collector street. The section of this street which has been constructed was built to collector street standards. Since development originally anticipated in the Shell Ridge area has not materialized, the need for this street to serve as a collector no longer exists. It is recommended in this plan that Comistas not connect beyond Snyder, if it is to be extended at all. Areas south of Northgate High School which previously would have been served by this street should obtain access off Castle Rock Road.
5. Hutchinson Drive: Hutchinson Drive should terminate in a cul-de-sac. Because of the elementary school, new traffic on Hutchinson should be minimized.

Roadway Implementation

The ability to effectuate many recommendations contained in this plan depends, to a large extent, on availability of financial resources. Unlike some other General Plan Elements which can be carried out by enacting ordinances and policies, circulation recommendations must usually rely on local, state, or federal monetary sources for their implementation. The extent to which circulation improvements are constructed will affect travel times, traffic safety, development potential, and the mobility of Walnut Creek residents.

This implementation program estimates the cost of recommended improvements, assesses the likelihood for these improvements to be financed, and evaluates potential new sources of funding.

COST ESTIMATES

Recommendations for improvements which must be implemented through public expenditure rather than development dedication or off-site improvements resulting from development are shown in Table 1. This list is intended to include only those items appropriate for discussion in the General Plan. Small-scale cost items were not included.

Cost estimates shown in Table 1 are intended only as a guideline for study purposes and were based on general estimates of land value, construction costs, and other factors. Precise cost estimates will be computed as decisions are finalized and precise engineering designs are formulated.

Long-term projects such as the widening of portions of Olympic Boulevard have not been computed since these improvements are not presently needed and any current cost estimate may be totally outdated in 10, 20 or 30 years.

Cost estimates of projects which are located within the unincorporated areas have not been undertaken. It is anticipated that upon adoption of this plan, the City will then urge the County to undertake cost estimates of various projects and to include them at an early date in its Capital Improvement Program.

FUNDING SOURCES

The following analysis has been developed to serve as a guide to available and prospective monetary sources available for street and highway improvements.

1. Existing State and Federal Sources:

Interstate Highway System (FAI): Interstate highway funds are a major source of implementing freeway related improvements. In recent years, high construction costs and inflation have decreased the buying power of these, as well as other, funds.

Recently, the Federal legislation governing FAI allocations was modified. Although no new money was added to this program, additional flexibility was granted in the use of these interstate highway funds. Previously, monies were available only for projects which had not previously received FAI funding.

Now all interstate highway improvements are eligible and Walnut Creek could use this source to fund any ramp construction. To be granted a high priority rank, any FAI project should be designed to improve the performance of I-680. An 8 percent matching commitment is required to obtain funds. Usually this cost is borne by both the state and local jurisdictions.

Federal Aid Urban (FAU): The Federal Aid Highway Act of 1973 directed establishment of a street funding system in urbanized areas. FAU funds provide up to 80 percent of project cost, and Contra Costa County's share in recent years was approximately \$2.6 million. Funding of the program is rather low at the present time, thus the competition between localities is high. The Federal Highway Administration will not consider a project unless it has been approved as an FAU route. Recently, Walnut Creek incorporated almost every major arterial and collector street into FAU route status. Generally, this source of funds can be utilized only for major projects, but the City could submit a proposal for a comprehensive set of improvements.

TABLE 1: SUMMARY OF RECOMMENDED STREET IMPROVEMENT PROJECTS

CORE AREA:

<u>STREET</u>	<u>LOCATION</u>	<u>IMPROVEMENT</u>	<u>COST</u>	<u>POTENTIAL FUNDING SOURCE</u>	<u>COMMENTS</u>
Mt. Diablo	Between Oakland & California	Widen Unimproved portion	\$20,000	CIP*, Development Dedication	
Mt. Diablo	Between California & Main Street	Widen unimproved portion	--	Redevelopment Ded. or Redevelopment Funds	
Mt. Diablo	Oakland to Main	Landscaping	(?)	CIP, Assessment District	
S. Main	At Newell	Widen S. Main to provide additional northbound left turn to Newell	\$150,000	CIP, FAU†	
S. Broadway	S. of Newell	Extend to Rudgear Interchange	\$3.2 Mil.	FAU, Interstate CIP, Bonds	
Creekside Dr.	At future S. Broadway	Provide emergency access	\$20,000	CIP, Assessment District	Contingent upon S. Broadway installation
Parkside Dr.	Between I-680 & Civic Drive	Provide additional freeway access	\$1.31 mil.	FAU, CIP	Est. does not include freeway ramps
Broadway	N. of Pine St.	Connect to future Parkside Drive	\$500,000	Development Dedication	
Bonanza	At Alpine	Connect to Alpine to form one intersection on Mt. Diablo Boulevard	--	Redevelopment Funds	Shown in Core Area Plan as a low priority

* - CIP - Capital Improvement Program Budget

† - FAU - Federal Aid to Urban Highway System Fund

‡ - CCT - City/County Thoroughfare Fund

TABLE I (Continued)

LARKEY/NORTH WALNUT CREEK:

<u>STREET</u>	<u>LOCATION</u>	<u>IMPROVEMENT</u>	<u>COST</u>	<u>POTENTIAL FUNDING SOURCE</u>	<u>COMMENTS</u>
Geary Road	Bet. Buena Vista & Main	Widen to 4 lanes	\$350,000	FAU, CIP, CCT#	Low priority, do as traffic warrants.
Geary Road	Buena Vista to PH Road	Widen to 4 lanes	--	FAU, CIP, CCT	Low priority, do as traffic warrants.
San Luis Rd.	Bet. Main St & Buena Vista	Widen and Improve	\$160,000	CIP, Assessment District, Development Dedication	
N. Main St.	Between I-680 and Geary Road	Complete widening to 4 lanes	\$80,000/ \$2.7 Mil (a)	CIP, Assessment District, FAU	Primarily in County
N. Main St.	N. of Geary to City-Limits	Complete widening	--	CIP, FAU	Will be completed in 1978-80; already in CIP

(a) - \$2.7 million is the estimate for complete widening of North Main from California to Geary -- including \$1.8 million for widening N. Main Street - I-680 overcrossing.

TABLE 1: (Continued)

SIGNIFICANT

<u>STREET</u>	<u>LOCATION</u>	<u>IMPROVEMENT</u>	<u>COST</u>	<u>POTENTIAL FUNDING SOURCE</u>	<u>COMMENTS</u>
Walnut Ave.	Near Hutchinson/ Snyder	Widen to 4 lanes	\$217,000	CIP, CCT	Low priority
Treat Blvd.	Bet. Bancroft & I-680	Widen to 6 lanes	--	County, FAU, CCT	Needed now - in County CIP* for 78-79
Bancroft	N. of Treat	Eliminate vertical separation	--	CIP, CCT	Low priority
Bancroft	N. of David	Widen bridge to 4 lanes	\$60,000	CIP, FAU, CCT, Concord	Low priority
Bancroft	At future inter- section w/Banbury	Signalize this intersection.	--	County, Development Dedication	
25 Mitchell, Wiget, Shade- lands	E-R District	Various road and sig- nal improvements	--	Assessment District	
Oak Road	N. of Walden	Widen to 4 lanes	--	County, FAU, CCT	In County CIP
Jones Road	S. of Treat	Connect to Treat	--	County, Development Dedication	
Snyder Lane	Nr. Walnut Ave.	Widen and improve road	--	County	
Cedro	Nr. Walnut Acres School	Complete street Section	--	School District	Mt. Diablo School District responsibility
Valley Vista	@ Oak Grove	New bridge & realignment	--	CIP	
Private Street	YVR @ John Muir Hospital	Widen exit roadway	--	CIP & Hospital	Depends on Hospital co-op

TABLE I (Continued)

ROSSMOOR/DEL VALLE:

STREET	LOCATION	IMPROVEMENT	COST	POTENTIAL FUNDING SOURCE	COMMENTS
Olympic	Newell & Tice Valley Blvd.	Complete widening to four lanes	--	County, CCT	Listed in County CIP for 76-77, but will probably not be constructed until later.
Olympic	P.H. Road to Tice Valley Blvd.	Widening to 4 lanes	--	County, CCT	Long-term project; low priority.
Olympic	Newell - I-680	Widen to 4 lanes	--	County, CCT	Long-term project; low priority.
Boulevard Way	Olympic to Saranap	Minor safety improvements.	--	County, CCT	
Tice Valley	City-limits to Crest	Safety improvements	--	County, CCT	Needed now.
Tice Valley	@ Olympic	Intersection widening	--	County, CCT, Development Dedication	Needed within next 5 years.

SOUTH WALNUT CREEK:

Livorna	Between I-680 & Trotter	Widen @ major intersection in future.	--	County, CCT	Keep 84' R/W in case needed
Walnut Blvd.	Entire length	Safety improvements	--	County, CIP, CCT	
Homestead	Entire length	Safety improvements	--	County, CIP	
Walker	Entire length	Safety improvements	--	County, CIP	

State Freeway: Caltrans' fiscal difficulties have been widely publicized in recent months. Their future funding situation is uncertain and optimism hinges primarily on the prospect of a modest increase in the gasoline tax. For the most part, State freeway monies are now being used as matching funds towards projects eligible for federal funds. Along the I-680 corridor, numerous improvements are needed, and again competition will be severe. The forecast for Caltrans indicates that unless the situation is radically improved, the State will be in a strictly maintenance function within a few years, and funds will not be available for construction of new facilities. Nevertheless, Walnut Creek should continue to strive for approval and funding.

2. Local Funds:

Existing Sources: The City (and County) each derive their funds from a variety of sources. Some of these funds are designated for specific uses; other funds are general and can be applied for either operating expenditures or capital improvements. Walnut Creek obtains funds from sources such as the property tax, sales tax, gasoline tax, revenue sharing, fines and forfeitures, parking meters, block grant funds, business license taxes, and various other sources of revenue.

Most of these funds (except gasoline tax and block grant money) are allocated toward the City's general fund. The general fund is then used to finance both the operating expenditures as well as a segment of the capital improvement program. In recent years, the general fund totaled approximately \$2½ million of which approximately \$900,000 was contributed to the capital improvement program. The City's financial forecast projects a decline in funding during the next five years.

New Financial Sources: Staff has reviewed various concepts for raising additional local revenue to finance capital improvement projects. Of these sources, two appeared most acceptable to Walnut Creek:

1. Parking Increase: The City now generates \$110,000 yearly from its parking meter revenues. If the current ten cent/hour rate were increased, a considerable amount of revenue could be generated. Although parking meter charges are now comparable to what other cities charge, this source should be reevaluated in a few years.

2. Redevelopment: Under California's state law, a redevelopment project cannot be undertaken solely to provide public improvements. However, an aggressive redevelopment program in Walnut Creek's Core Area might lead to a greater level of street and circulation improvements in the downtown area.

Note: The likelihood of a general obligation bond issue to finance improvements was analyzed and rejected. The Commission felt that a street improvement bond cannot be sold to the community because many street improvements are controversial and do not provide a community-wide benefit. The state-wide history of street improvement bonds has shown a high failure rate.

Roadway Alternatives Considered

ALTERNATIVES TO PROVIDE BETTER EAST-WEST TRAFFIC FLOW

Alternatives available to improve east-west traffic flow on Ygnacio Valley Road and Treat Boulevard have been the topic of considerable study. Throughout this transportation planning process, many alternatives to provide even a small measure of relief to these corridors were considered. Other than capacity improvements at intersections and signal timing modifications, virtually every alternative has been rejected. The result of these decisions will be increased congestion on Ygnacio Valley Road and Treat Boulevard, which local residents will have to accept. Alternatives considered included:

1. Adding an East-West Freeway to the Plan: With the existing level of development in Walnut Creek and Concord, this alternative would incur unacceptable costs, social disruption and environmental impacts.
2. Widening Treat and Ygnacio Beyond Three Lanes in Each Direction: Widening Treat Boulevard and Ygnacio Valley Road beyond a total of six lanes would not solve the traffic problems. Since the one lane freeway ramps limit cars entering and exiting the freeway, additional lanes will only increase the bottleneck. Pedestrian crossings would be more difficult and would, perhaps, require overcrossings or undercrossings. From a cost standpoint, this solution is impractical.
3. Transit: If the transit system recommended in the transit element were implemented as proposed, it would have a minimal effect on today's congestion along the Ygnacio and Treat corridors. The high cost of bus systems and the low patronage now found in suburban systems dictate that transit will not relieve much auto traffic from these routes. Even if auto disincentives, such as transit-only lanes or fuel rationing were instituted, it is doubtful that transit would carry a significant passenger load. Other types of transit, such as a monorail or a subway would be too expensive for the need foreseen in the time frame of this plan.
4. Adding Capacity by Constructing New Streets: Two new streets were explored but rejected that would have provided additional capacity for east-west travel are: (a) The Castle Rock-Livorna Road connection would have eliminated some of the traffic which ultimately heads south on I-680 from Ygnacio Valley Road but, again, the cost and impacts were greater than the benefit. (b) The extension of David to Coggins Lane was also studied as a measure to relieve traffic on Treat. However, this new street would have resulted in severe neighborhood impacts.
5. Decreased Development or Lower Densities: In order to decrease traffic volumes on Ygnacio Valley Road and Treat, the alternative of lowering land use densities was evaluated. Within Walnut Creek's sphere of influence, the City has taken several actions in recent years in line with this alternative. The City has lowered residential densities in appropriate areas; explored (but not implemented) the concept of permitting only uses in the E-R District which are low traffic generators; and participated in open space programs including coordination with the cities of Clayton and Concord to purchase several hundred acres of land in the Lime Ridge and Shell Ridge areas. Further land purchases could be undertaken to reduce future traffic growth. Ironically, the cost of purchasing all the vacant land in Walnut Creek, Concord, and Clayton may be less than the cost of constructing a new freeway if that alternative were being seriously considered.

ALTERNATIVES TO IMPROVE ACCESS TO YGNACIO VALLEY ROAD

1. Extension of Fyne Drive to Arbol Via: The Commission studied the opportunity to provide additional access to the San Miguel area by permitting vehicular access between Fyne Drive and Arbol Via. It was felt that the benefit from this connection would be small and that the neighborhood streets would not bear additional through traffic. The extension of Fyne Drive to Comistas was also considered and was rejected for similar reasons.
2. Extension of Dover Drive to Ygnacio Valley Road. Several circulation improvements could be derived by extending Dover Drive to Ygnacio Valley Road at its intersection with Wimbledon. This street extension would allow easier access for some Scottsdale residents to get to Ygnacio and would remove some traffic from the congested intersection at Walnut Avenue. Since the signal at Wimbledon has excess capacity, the Dover Drive extension would permit a more efficient use of this under-utilized intersection. However, the extension was rejected because of the disruption that would result to the church and the school sites and the neighborhood in general.

ALTERNATIVES TO CONNECT BONANZA TO BROADWAY

Lincoln to Bonanza and Walker to Lincoln:

In the past it has been suggested that a through street be developed between N. California Boulevard and Sierra Drive by connecting Bonanza to Lincoln and Lincoln to Walker. The Planning Commission considered this matter during discussions of the Core Area Plan and recommended that the street connection should not be made because of the likely increased through-traffic in the pedestrian-oriented Main/Locust shopping area. Such a street would likely attract even more through-traffic from the Core Area to the Ygnacio Valley areas through the Walnut-Homestead neighborhood.

The Transportation Commission reaffirmed the Planning Commission's recommendation, but it also considered other possibilities including the extension of Bonanza to Broadway with no connection to Lincoln Avenue or Walker Avenue.

This alternative would provide improved circulation within the Main/Locust area by providing a direct connection between Broadway and North California Boulevard. But, the cost of this roadway extension, the need for a new signal at the Bonanza/Broadway intersection, and the increased through-traffic in the pedestrian-oriented Main/Locust area caused this concept to be rejected.

An additional alternative of extending Bonanza to Lincoln, but not connecting Lincoln to Walker was also considered. This improvement would provide some circulation benefits but would increase costs because of the extensive realignment of Lincoln across the Walnut Creek. This project was rejected due to the high cost and limited circulation benefits.

ALTERNATIVES FOR IMPROVEMENT TO WALKER AVENUE

The Commission considered a proposed realignment of Mt. Diablo Boulevard east of the Southern Pacific Railroad tracks. The proposed new alignment would have provided a more direct connection between Mt. Diablo Boulevard and Sierra Avenue. This project would eliminate the existing sharp curve in Walker and provide a more attractive route between Mt. Diablo and Ygnacio Valley Road via Sierra and Walnut Boulevard. It would also have closed Sierra Drive south of Mt. Diablo and redirected traffic now using this street to San Miguel. The estimated cost for this improvement would be approximately \$400,000 for right of way and \$215,000 for construction for a total project cost of \$615,000. This cost could not be justified by the Transportation Commission. The Commission recognized that the present intersection serves to restrict traffic on Homestead and Walnut Boulevard and considered this a desirable goal.

EXTENSION OF TICE VALLEY ROAD TO RUDGEAR ROAD INTERCHANGE

Illustrated on the County's Circulation Element of their General Plan and on the City's General Plan adopted in 1971, is the connection of Tice Valley Boulevard to Rudgear Road interchange at I-680. The intent of this recommendation was to provide a more direct and attractive way to get from the Tice Valley area to Danville Highway and I-680 and thereby relieve traffic from residential streets now carrying this through traffic. The cost of this proposed improvement ranged from \$1.5 to \$3.0 million, depending on the design of this road extension. Several problems would be incurred because of the grade changes, the need to acquire several properties, and the impacts along Tice Valley Boulevard from an improved freeway access. For these reasons, this extension has been eliminated.

ALTERNATIVES TO PROVIDE RELIEF TO SOUTH MAIN STREET

Several alternatives, including the recommendation to extend South Broadway to Rudgear Road, were explored as a means of providing relief from congestion on South Main Street. So. Main now provides the only southerly access to the Core Area. The street operates at about 80% of its capacity now and is expected to be functioning at about 110% of its capacity within 10 years. Alternatives to mitigate this anticipated congestion include:

1. Widening of South Main Street:

Widening So. Main, south of Newell Avenue to six lanes would provide only a small measure of relief. Although this could easily be achieved by eliminating on-street parking, the intersections along So. Main are the constraint for traffic flow. Without a concurrent improvement of these intersections, a six lane road width is of little value.

2. Intersection Improvement of So. Main and Newell:

If the intersection at Main and Newell were widened to allow easier turning movements, the capacity of the intersection could be increased. If a north-bound right-turn lane, dual left-turn lanes, and a new southbound right-turn lane were added the intersection could accommodate some additional vehicles. However, even with this improvement, congestion will increase because of new growth in the Core Area and south of Walnut Creek. If this improvement is made, further congestion will still persist at the intersection of South California and Newell and at South Main and Lilac.

3. Extend South California to South Main Street:

The possibility of extending South California to South Main Street at Lilac was explored as a way to reduce congestion on South Main Street. This scheme would involve cutting through Kaiser Hospital's parking lot, paralleling I-680 and connecting into Lilac Drive just west of Main Street. This alternative differs from another proposal to extend South California to connect with I-680.

The Transportation Commission rejected this alternative because it would add severe congestion to the intersections of Lilac and South Main and at South California and Newell. Furthermore, the Kaiser Hospital grounds and parking lot would be disrupted.

4. Extending South Broadway to South Main at Lilac:

An alternative to extending South Broadway to Rudgear Road would be to construct a shorter extension to Lilac Drive at South Main Street. This new street would be routed through the Las Lomas High School site if that school is abandoned. This street would provide some relief to Main and Newell and S. California and Newell. However, S. Main would remain as the only southerly access to the Core Area.

TRANSIT



Transit Overview

HISTORY OF TRANSIT IN WALNUT CREEK

Public and private transportation systems are not a new phenomenon in Walnut Creek. Between 1868 and the early 1900's, Walnut Creek was served by a stagecoach line which connected Walnut Creek with Oakland. This service faded into history as the Southern Pacific and Sacramento Northern Railroads initiated passenger service which connected Walnut Creek with other cities to the north, south, and west.

In 1940, the railroads restricted their operations to hauling cargo; and, shortly thereafter, Greyhound began bus service. At the peak of its operation, Greyhound carried 1,800 passengers daily into the Oakland and San Francisco metropolitan areas. With the inauguration of BART in 1973, Greyhound was supplanted as the major form of regional transit serving Walnut Creek. BART now carries approximately 6,700 passengers each day from the Walnut Creek and Pleasant Hill Stations.

Current transit systems serving local travel needs include the City's downtown shuttle and Ygnacio Valley buses, the privately operated Rossmoor bus, school buses, the Senior Citizens' van and the taxi company. Although each of these services fills a portion of the transportation needs of the community, there is no comprehensive area-wide transit service other than that provided by the taxi company.

TRANSIT DEMAND IN WALNUT CREEK

Walnut Creek can be generally characterized as an affluent community whose primary transportation needs are met by the private auto. About 96% of the adult population drives and 92% have a vehicle available to them all or some of the time. In spite of this high degree of availability of autos there is still a need in the City to serve those groups of the population that are without access to cars.

Proponents of public transportation have argued that transit is needed to serve as an "alternative" to dependence on the auto. As an alternative to the car, a transit system should enable some families to own fewer cars or to reduce their mileage travelled. Persons such as senior citizens and youths who are without access to a car would benefit from the increased mobility afforded by a bus system. Lastly, BART can be made more effective as a regional transportation mode if local connections are provided. The state and federal governments have both enacted numerous legislative and financial measures to make public transportation more available to local communities.

In spite of the general support for local transit, new transit systems usually face high "start up" costs as well as need a high level of subsidy to continue operating. In suburban communities, where patronage is generally quite low, a transit system cannot yet be expected to attract enough riders to appreciably reduce congestion, air pollution, and fuel consumption.



■ B.A.R.T. Station
--- Bus Route

**existing
DOWNTOWN
SHUTTLE BUS ROUTE**



FIGURE 7

Transit Recommendations

GOAL:

To plan and implement a comprehensive public transportation system that will offer a "skeletal" level of service through the Walnut Creek area.

OBJECTIVES:

1. To provide public transit service within the City to major activity centers and coordinate them with regional transit systems in terms of transfers, schedules, routes, and fares.
2. To encourage the establishment of an eventual area-wide public transit system.
3. To provide public transit amenities such as bus turnouts, shelters, benches, and in some cases, sidewalks or pedways.
4. To encourage the use of the BART system.
5. To discourage increased use of the private automobile where other superior alternatives are available.
6. To place the highest priority on public transit expenditures which benefit those segments of the population which are without access to a private automobile.

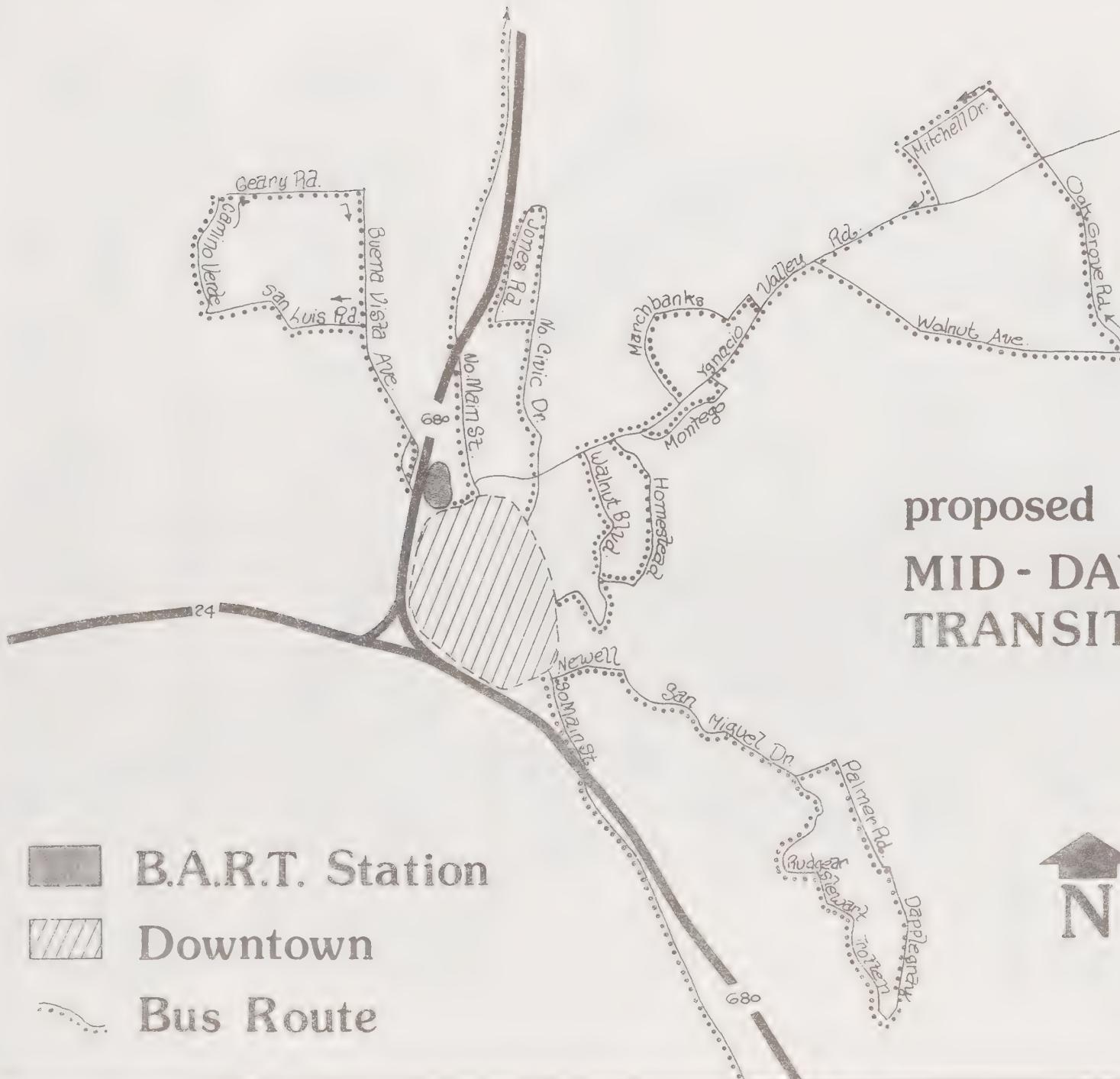
SHORT-TERM PROGRAM:

During the next few years, the City should continue to implement a skeletal transit system throughout much of the community. This system should be comprised of several routes which are arranged in a radial configuration, usually using the downtown as the hub from which routes emanate and return. Buses should be kept in character with the community by using small, quiet vehicles which are identified by the City's colors and logo. Routes should be confined where possible to collector or arterial streets to minimize any impacts in neighborhood areas.

The City should implement the proposed bus system in an incremental fashion in which each route is carefully evaluated and refined prior to the addition of new service.

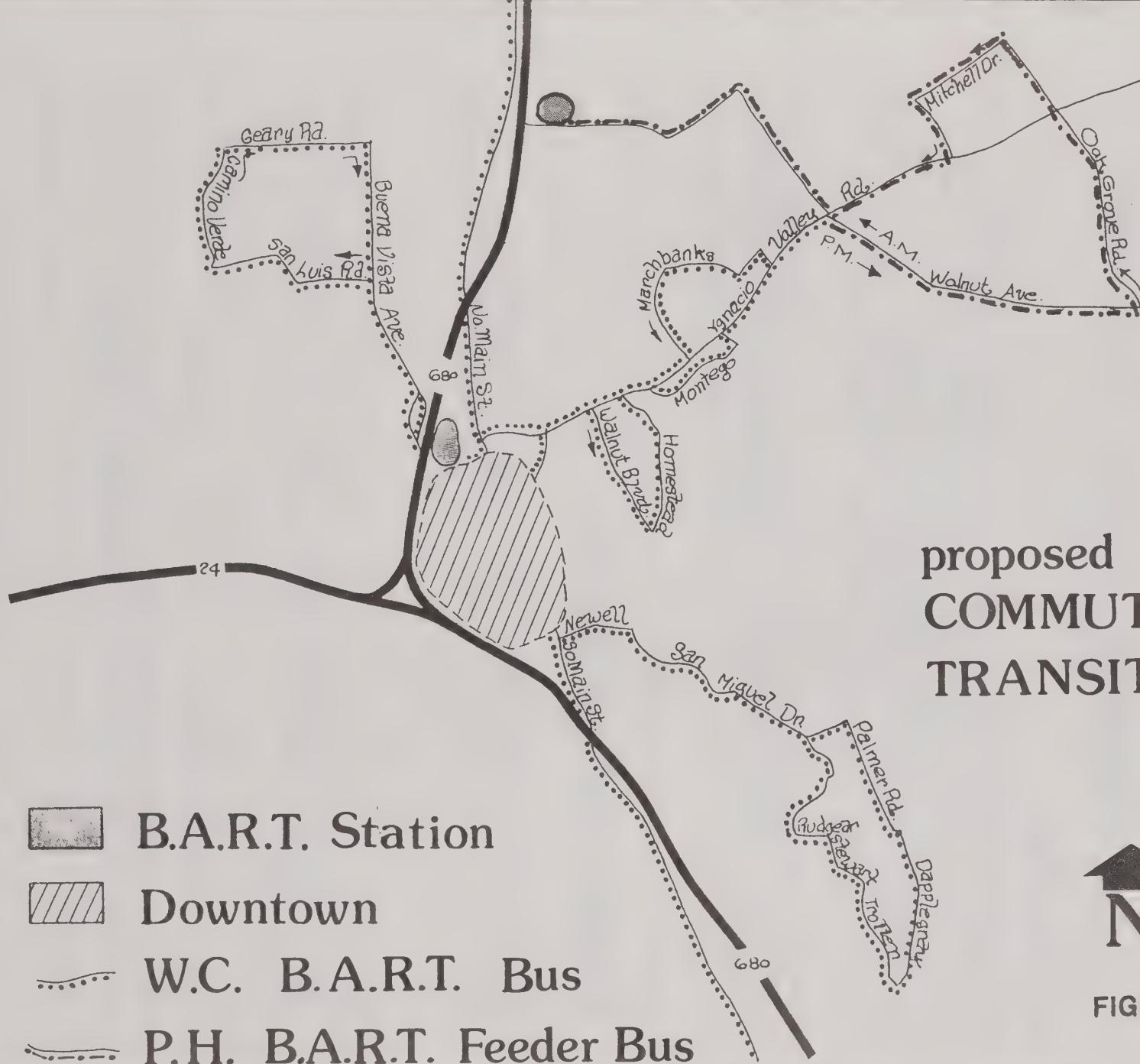
Concurrent with the implementation of a fixed-route bus system, the City should encourage at least three other forms of transit:

1. Van Pools provided by employers, homeowners' association, or other parties.



**proposed
MID - DAY
TRANSIT ROUTES**

FIGURE 8



**proposed
COMMUTE HOUR
TRANSIT ROUTES**



FIGURE 9

2. Handicapped transportation system provided as a special service to those persons who are without access to regular transportation facilities.

3. Private bus service in the form of a subscription commuter buses for private housing developments.

LONG-TERM PROGRAM

The long-term future of transit service in the Walnut Creek and central county areas is uncertain. Continual revisions to state and federal funding sources as well as competing demand for local monies make transit operations somewhat tenuous. However, if transit becomes a heavily used public service and warrants continued operation, a coordinated area-wide transit system consisting of at least the cities of Walnut Creek, Pleasant Hill, and Concord has the greatest chance of meeting transit needs in the central County area.

A central County system or tri-city system could be set up via formation of a County Service Area, Joint Powers Agreement, or through the formation of a new transit district. In any case, it is important that transit decisions affecting this area be made by representatives who are responsible to the local electorate.

Transit Implementation

Walnut Creek has recently submitted a claim to the Metropolitan Transportation Commission (MTC) for Transportation Development Act (TDA) funds to assist in financing the City's existing bus system and the establishment of additional service.

Should Walnut Creek fail to receive TDA money for its own bus system, other financing sources should be explored or the City should terminate further attempts at expanding its shuttle services. Other types of revenues might be sought through the creation of a County Service Area or through a special tax rate election.

If Walnut Creek is successful in obtaining TDA funds, the City should pursue further incremental expansions of the shuttle bus program.

Concurrent with the expansion of the fixed-route system, the City should explore the van pool concept and the handicapped bus program.

A suggested timetable for action is as follows:

FY 77-78 - Establish expanded bus system

- Establish handicapped transportation program

- Establish van pool program

FY 78-79 - Refine shuttle program and add 1-2 routes (assumes MTC approval of TDA application

- Refine van pools and handicapped service as needed.

FY 79-80 - Refine transit program as needed.

Transit Alternatives Considered

NO TRANSIT SERVICE IN WALNUT CREEK

The option not to provide local public transportation in Walnut Creek was rejected for several reasons:

1. The City's initial transit endeavors showed a broad amount of public acceptance.
2. Some degree of mobility is needed for Walnut Creek's transit-dependent population.
3. Transit service can begin to serve as an energy conservation measure.

DIAL-A-BUS

In the formulation of this plan, the Dial-A-Bus System was evaluated and determined not to be appropriate for Walnut Creek. Recent failures of dial-a-bus systems in Richmond and Santa Clara County illustrated that this concept of busing has some severe limitations and would probably not be successful in Walnut Creek.

High costs, a large geographical area, an inappropriate street configuration, and failure of support for the 1974 T-2 initiative were some of the major reasons for abandoning this type of transit.

ALTERNATIVE ROUTES

1. Arterial Route Only Scheme. The Commission explored the possibilities of placing bus routes only on arterial or collector streets.

Generally, about 90 percent of their proposed route system relies on the use of major streets. Occasionally, portions of a route follow a residential street due to the need to provide "turnarounds" or the desire to serve a wider area than could be served from an arterial or a collector street.

2. Other Alternatives. During its deliberations, the Transportation Commission considered numerous alternatives to each route recommended. The routes illustrated were the result of compromises between the desire to serve as many neighborhoods as possible and still maintain acceptable headways.

The Transportation Commission considered an expanded system to that which was proposed but rejected it because of costs. The system proposed is a skeletal system which can later be expanded should the need arise and financial forecast improve.

A smaller scale bus system, perhaps limited to only that which is now in effect, was also rejected by the Commission. It was thought that each sector of the community should have at least one route available.

BIKEWAYS



Bikeway Overview

In the early and mid-1970's, the United States experienced a tremendous growth in bicycle sales and use. As a result, there are almost as many bicycles in Walnut Creek as there are cars. Although many bike trips are for recreational purposes, the role of the bicycle for intracity travel warrants serious consideration.

Approximately 40 percent of the trips a person makes from his home are less than two miles in length. In a relatively flat suburban community, the bicycle can be used for many of these short distant jaunts. Over 300 BART commuters and thousands of students use bicycles each day for "work trips".

The function of bike routes and this bikeway element is to improve the opportunity for bike travel. It is hoped that the installation of bikeways will improve the safety of bike riders and promote this mode of travel as an alternative to the car. Several forms of bike trails have been proposed for the Walnut Creek system; but, generally, bike trails can be divided between on-street and off-street facilities. When bicyclists use on-street paths, they are competing for space with automobiles. Most designs for on-street routes establish specific separations between bicyclists and motorists and are usually identified by signing and striping.

Off-street bike routes can be located parallel to traffic corridors or be completely separated from auto and pedestrian routes. These are usually the safest type of bike trail and are enjoyed by most riders.

Proposed Bikeway System

GOAL:

To encourage bicycle use as a viable transportation mode.

OBJECTIVE:

To establish a City-wide network of bikeways in which potential conflicts with motor vehicles are minimized.

PROPOSED BIKEWAY PROGRAM

1. Continue to pursue the incremental installation of bikeways system proposed on the attached map.
2. Promote the installation of proper bike parking facilities at schools, parks, transit stops, office buildings, shopping centers, or other destinations where bikes can be used as a means of travel.



proposed
BIKEWAY SYSTEM

FIGURE 10

3. Monitor the performance of bikeways in terms of safety, frequency of use and disruption to auto travel and parking.
4. Promote bicycle education and safety programs in the school system and news media to keep both the rider and driver better informed.
5. Cooperate with the surrounding jurisdictions and regional agencies to achieve a regional bike system throughout the Central Contra Costa County area.

Bikeway Implementation

Funding is currently available from a variety of sources for implementing bikeways but considerable initiative on the part of the City will be required to actually obtain funds.

The following is a list of ways to finance the remainder of the Bikeways Element:

1. Transportation Development Act Funds. These funds are designed to finance bike routes which are related to transit facilities.
2. SB-36 Funds. MTC administers state funds which are available to local governments to install bikeways. Walnut Creek has used this source in FY 74-75 through FY 76-77 to help finance the various bikeways in the community.
3. Land and Water Conservation Fund. The State Department of Parks and Recreation has made this fund available to finance recreational bike routes or bike routes leading to recreational facilities.
4. FAU. FAU funds bike routes along federal highways.
5. City General Fund. This source can best be maximized when used as matching monies.
6. Development Dedication. As the development or redevelopment process continues in Walnut Creek, projects can install bikeways as part of their required street improvements.
7. Demonstration Grants. Occasionally, demonstration grants are available to finance a particular type of bikeway. The cities of Walnut Creek and Concord have recently applied for monies to fund a bike route running between the two cities.
8. Street Improvements. As miscellaneous street improvements are completed throughout the City, careful attention should be paid to provisions for bicyclists.

In addition to pursuing a bikeway implementation, the City should insure that bike parking is adequate. As part of the Design Review process, every major office or retail project should be viewed to determine if some facilities are available for bicyclists. The City should insure that bike racks or lockers can be found at all Civic buildings and parks as well as at some of the bus stops.

Bikeway Alternatives

NO BIKEWAYS

The option of providing no bikeways whatsoever was rejected by the Transportation Commission. Although some routes are of greater or lesser benefit than others, it was felt that most bikeway provisions are desired by the community and are a worthwhile public expenditure.

INCREASED INCENTIVES TO BICYCLISTS

The provisions of bike lanes is not the only means of encouraging bicycle ridership. Other bicycle incentives and auto disincentives could be utilized to place a greater emphasis on bike travel. Options include: 1) install more off-street bikeways; 2) make sidewalks a legal place to ride for persons over 16; and 3) reduce auto parking at high schools and other areas.

PEDESTRIAN WAYS



Overview

Pedestrian movement is the most basic and natural form of transportation. However, in the 20th Century, this form of travel has been neglected in the development of cities. In some areas of Walnut Creek, the absence of pedestrian facilities is a serious deficiency. The lack of sidewalks or pathways prevents many people of all ages from taking safe and enjoyable walks.

Pedestrian walkways are needed for several reasons. First, pathways can complement school busing, public transit, and carpools by providing safe linkages between homes and bus stops or meeting places. Secondly, as a recreational activity, many people can use walkways for jogging, walking dogs, pushing baby strollers, or just visiting neighbors. Some people, particularly students, are dependent on walking as a means of travel. The provisions of safe walkways can, in many instances, reduce youngsters' needs to be chauffeured to school, recreational activities, etc.

Pathways could also be used for bike travel along some streets where bike-lanes are non-existent and impractical to construct.

The City's policies now require that sidewalks be installed at the time of development. In older residential areas, or along undeveloped parcels, the City requires no pedestrian improvements to be made. The burden to install sidewalks in all cases rests with the property owner, not the City. Likewise, sidewalk maintenance is a function of the property owner, not the City.

The County policies differ somewhat from the City in that they do not always require sidewalks in subdivisions or other new developments. These differences in development policies have resulted in a "hopscotch" sidewalk system along some streets.

Proposed Pedestrian System

GOAL:

1. To promote pedestrian and vehicular separation in areas of high pedestrian activity.
2. To give consideration to pedestrian movement in all street widening and signalization projects.
3. To provide street furniture and convenience in order to encourage pedestrian travel (e.g., benches, trees, pedestrian islands on wide streets, and shade protection from the weather).

RECOMMENDATIONS

Walkways:

Walkways are needed public improvements in certain sections of the planning area. Priority areas for installing walkways should be: 1) along roads leading to schools; 2) along arterial or collector streets which carry high

volumes of traffic and need a separated pedestrian area; 3) on all downtown streets and along major streets leading to the downtown; and 4) on all streets leading to transit facilities.

An initial inventory of streets which need improvements and which reflects the above criteria is depicted on Figure 11. Other locations may eventually warrant walkways as school boundaries change, additional development occurs, or traffic conditions change.

The concept of "walkways" has been used in this plan to connote a different concept than "sidewalks." Many sections of the City are opposed to the typical street development standards which call for curbs, gutters, and concrete sidewalks. The "walkway" concept implies more of a pathway which need not necessarily be paved or accompanied by curbs and gutters. The important aspect of a walkway is the separation of walking areas from vehicular lanes. An unobstructed gravel or asphalt strip is satisfactory in many of the areas which need better pedestrian facilities.

Street-Level Crossings:

In addition to providing pedestrian walkways and bike lanes to facilitate bicycle and foot travel, the City should not overlook the improvement of intersections or other street crossings for these two modes of travel. Bike lanes and sidewalks must be accompanied by carefully designed and located crossings if they are to be effective. Several traffic engineering design schemes can be employed to improve intersection crossing safety. Some streets such as North Main, between Mt. Diablo and Civic Drive, have recently been treated to improve pedestrian crossing safety. As part of the City's current traffic accident reduction program, important intersections in Walnut Creek will be analyzed in detail to see what improvements can be made for safer travel by pedestrians, bicyclists, and autos.

Overcrossings and Undercrossings:

Grade separated crossings are one of several ways to improve safety conditions at intersections where there are serious conflicts between vehicles and pedestrians or bicyclists. Unfortunately, overcrossings and undercrossings are not a complete solution to safety problems and can create new problems of their own. In the development of this plan, the need for overhead crossings at various intersections (particularly those along Ygnacio) was reviewed. The construction of overcrossings is not desired for the following reasons:

1. The high construction cost (\$200,000 to \$300,000) for an aesthetically designed crossing along a major street could not be justified. Annual maintenance costs of \$5,000 to \$10,000 would also be incurred with this structure.
2. Bicyclists cannot be forced to use overhead crossings; and at many intersections, bicyclists -- not pedestrians -- accounted for the highest percentage of non-auto trips. Since bikers have the right to use the road, safety problems may not be alleviated by a grade-separated crossing.

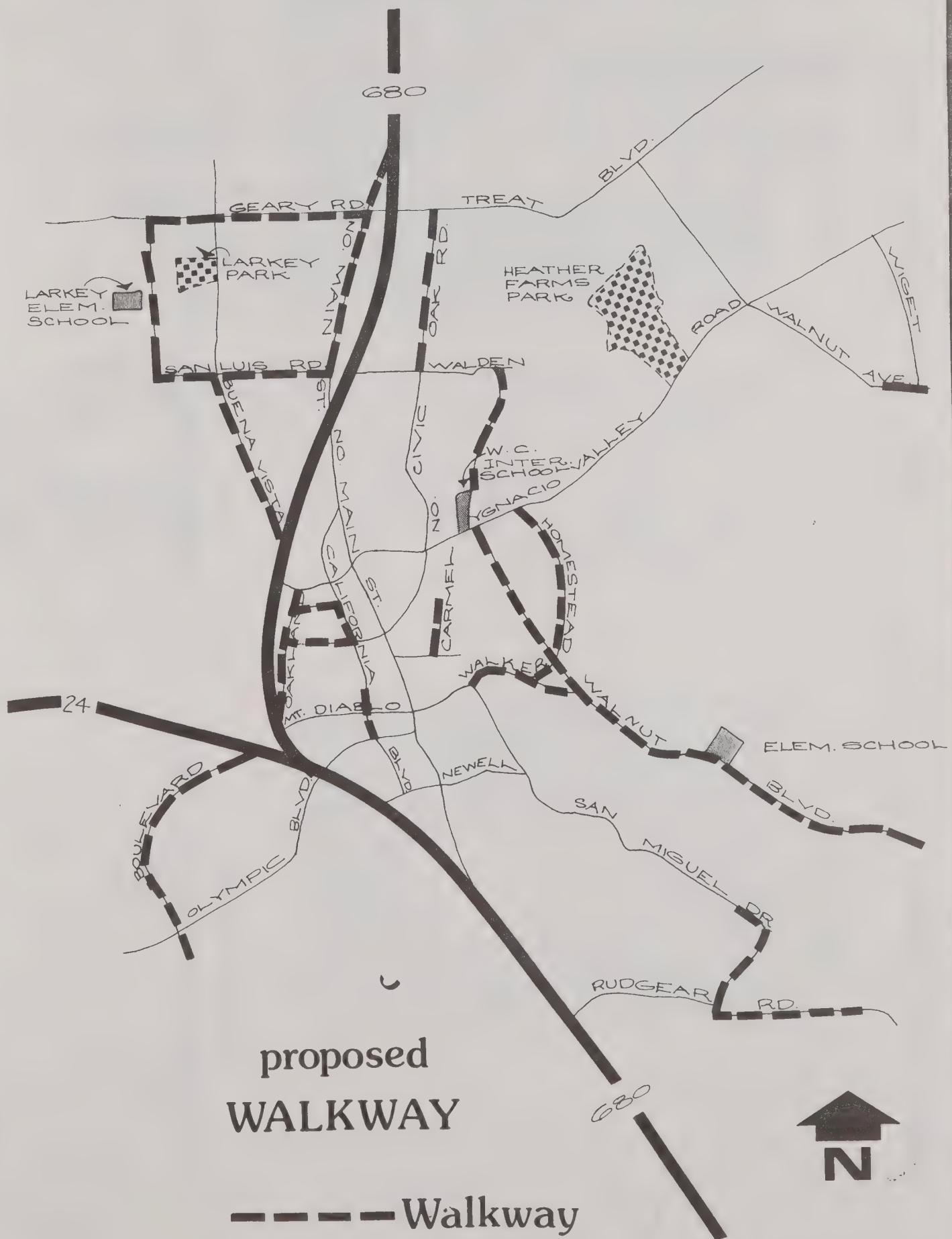
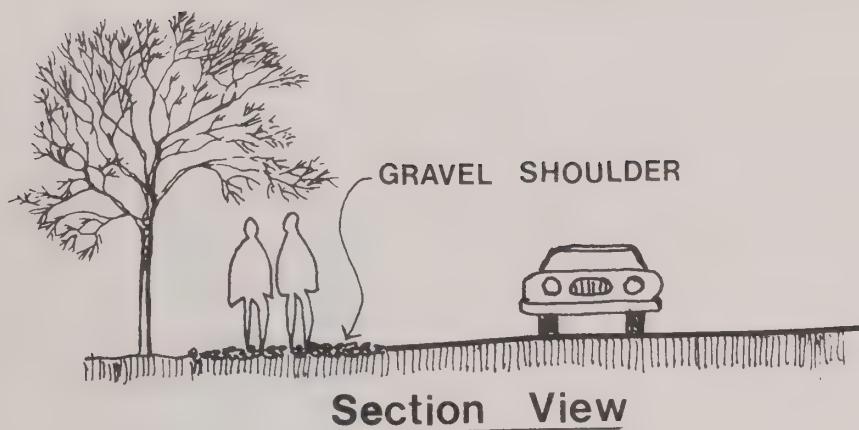


FIGURE 11

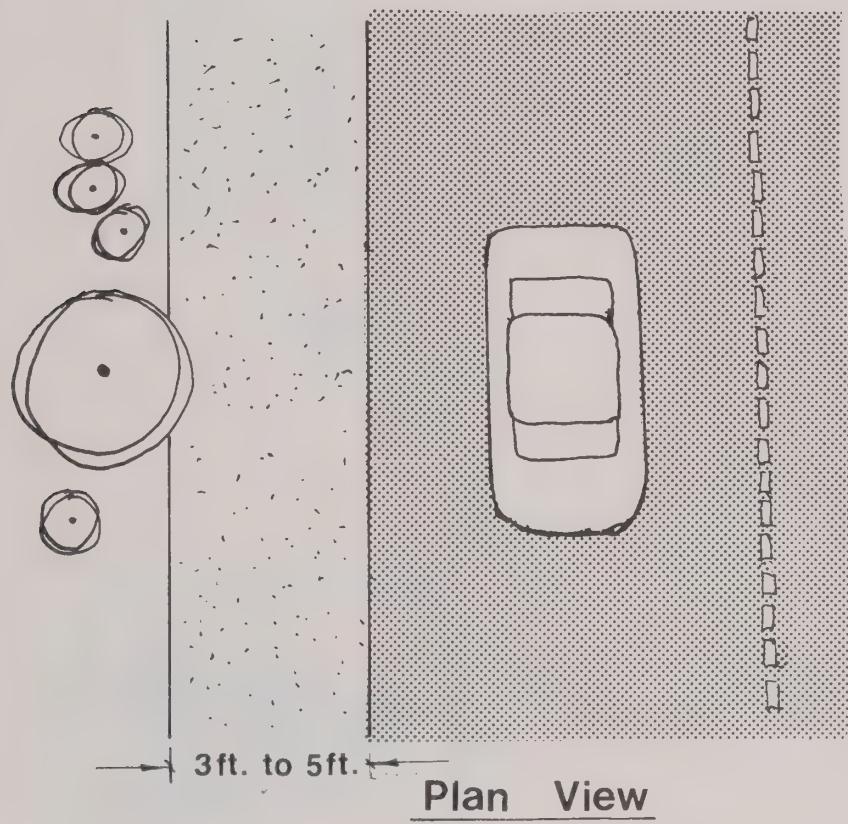
Implementation

A departure from the current City sidewalk policy is needed if pedestrian improvements are ever to be made. Three major policies are suggested:

1. Use of the 1911 Act and mandatory assessment districts are powers now available to local jurisdictions. (The 1911 Act permits local jurisdictions to require the installation of frontage improvements on those sections of a block which are unimproved, providing the majority of the block is improved.) The City (and County) should begin to exercise its enforcement powers to obtain needed improvements in selected areas.
2. The City should modify its development standards for improvements in already developed areas so that "pathways" rather than "sidewalks" can be installed. (See attached diagrams for sample standards.)
3. The City and County should offer an inducement to property owners to install pathways by offering to share in the cost along selected areas. A cost sharing program would encourage action on the owners' behalf.



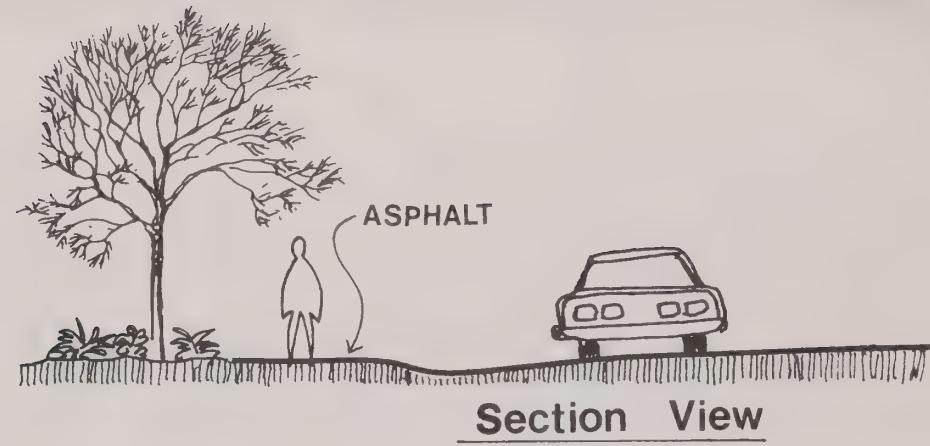
Section View



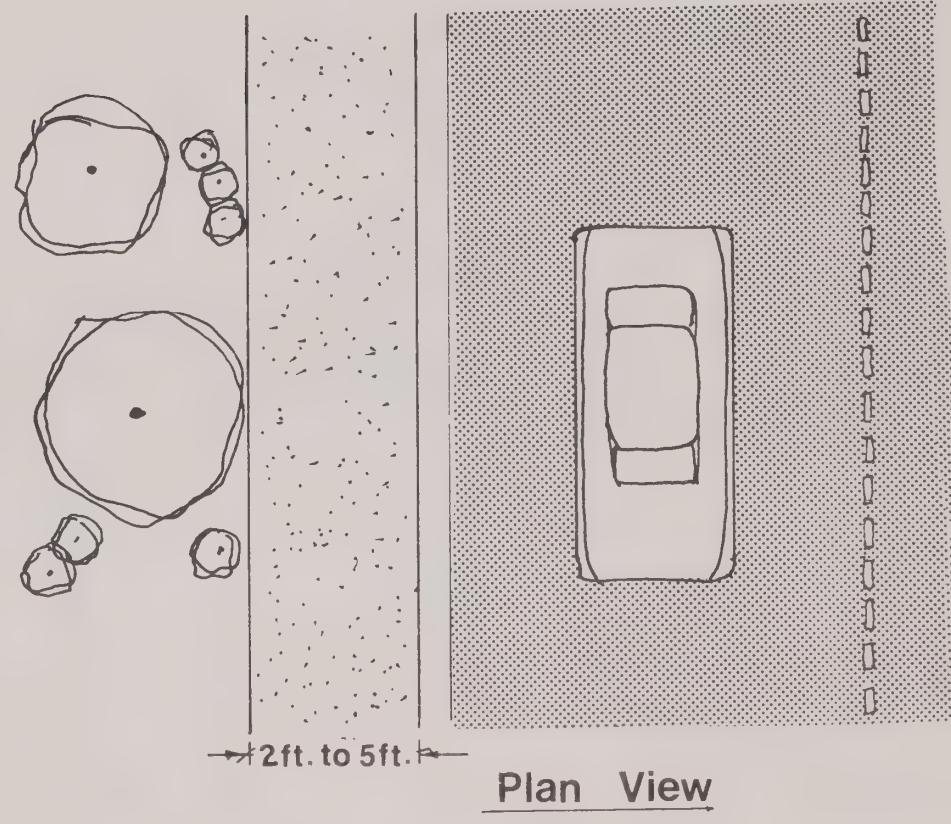
Plan View

Path w/ No Grade Separation

FIGURE 12



Section View



Plan View

Path w/ Minimal Gutter

FIGURE 13

PARKING & LOADING



Overview

Parking is a vital component of a city's transportation system. The availability of parking space for both private autos and commercial vehicles has a tremendous effect on the circulation system -- particularly in the Core Area. Policies relating to parking have an impact on the cost of development in Walnut Creek, the attractiveness of the central business district for retail trade as well as peoples' commute and shopping patterns.

The location and size of municipal parking facilities serving the downtown are shown on Figure 14. In Municipal lots, short-time limits favor shoppers over employees. Curb parking is also provided along virtually every Core Area street. In general, curb parking also has short-time limits and favors shoppers although a few areas have longer or no time limits and serve employees.

Spaces in most public lots are heavily used, especially the all-day spaces. Particularly used are BART's 1,100 spaces, which are typically filled by 8:00 a.m. on weekdays. Consequently, surrounding streets are utilized for BART's overflow parking.

Curb parking is well used in some areas, but only lightly used in others. Areas of heavy use include the BART station, the Main-Locust area, and the Kaiser Hospital area.

Walnut Creek's zoning ordinance requires new developments to provide individual off-street parking lots, typically at a ratio of one to every 250 square feet of office or retail floor space. Design Review also evaluates the adequacy of loading facilities for new projects. While these requirements have usually resulted in enough parking and loading space for new uses, it has also caused a proliferation of small parking lots. To encourage more efficient grouping of parking spaces, the City gives developers located in a parking assessment district the option of paying "in lieu" fees equivalent to the cost of one space in a parking garage.

Truck deliveries in the Core Area are now accomplished both on and off-street. The only major off-street loading facility is Commercial Lane, which runs from Civic Drive to Mt. Diablo Boulevard and supplies convenient loading to the rear of businesses along Main Street and Locust Street. Loading in the Broadway Shopping area is also accomplished primarily off-street, and Wilson Lane runs at the rear of some shops between Broadway and Main Street. Loading along the west side of Locust Street, however, is primarily done at the curb.

Proposed Parking and Loading Policies

GOAL:

To develop convenient parking facilities to serve the various activity centers of the City and to provide a system for goods loading in commercial areas which eliminates conflict with traffic flow.

OBJECTIVES:

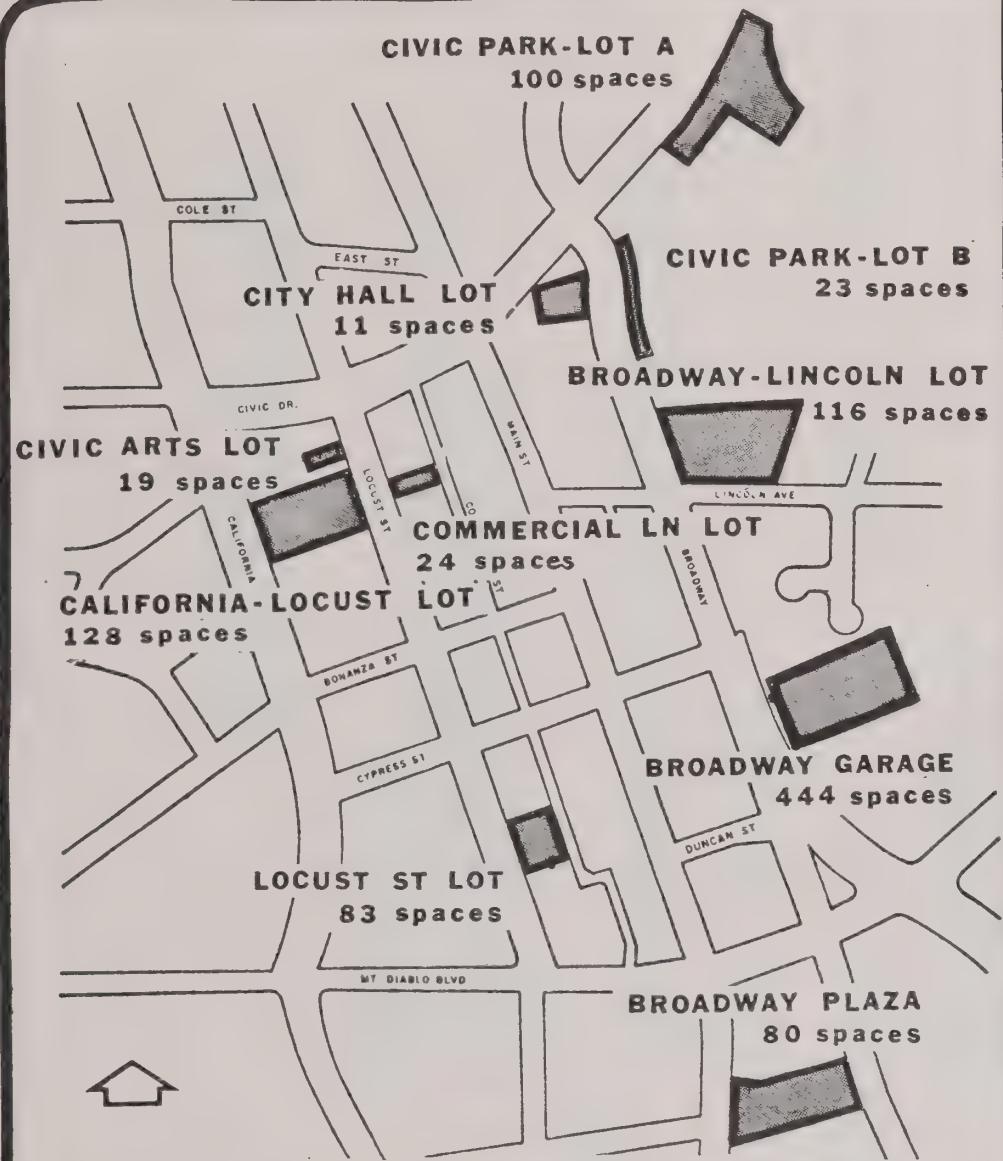
1. To provide the number of parking facilities consistent with land use needs, street system capacities, and public transit availability.
2. To assemble required parking into larger facilities oriented toward arterial streets and/or major activity centers conveniently located and carefully regulated to achieve the desired use.
3. To require the private sector to provide off-street loading facilities where feasible; in other areas, to designate on-street loading areas.

RECOMMENDATIONS

Parking:

Continued improvement of parking in the downtown and other areas of the City will require several actions. Policies recommended include:

1. Major parking facilities should be established on the periphery of the Central Core Area.
2. The lower floors of parking structures should be designated for short-term parking.
3. If curb parking is removed from arterial streets in the Core Area, off-street replacement parking should be provided.
4. The zoning ordinance should allow in-lieu fees to be substituted for a portion of on-site parking requirements and may consider reduced requirements for areas serviced by public transit, such as those near the BART station and along the shuttle-bus route. Funds from in-lieu fees should be used for parking space construction.
5. Surface parking should be assembled in some areas to minimize the total area devoted to parking and curtail the proliferation of small parking lots.
6. Shared parking facilities for appropriate downtown business areas, where they can minimize disruption of street frontage, provide improved access to parking, and promote a more efficient use of the parking by businesses with different parking needs.
7. The approximate location of where joint parking facilities are proposed is shown in Figure 15.



Existing Public Parking Facilities
Central Core Area

FIGURE 14



FIGURE 15

LOADING SYSTEM

If the City is to have efficient delivery service, new developments must be required to provide on-site loading facilities where feasible. In addition, the City should create new loading alleys similar to Commercial Lane. Two specific improvements are:

Commercial Lane: Straighten Commercial Lane north of Mount Diablo Boulevard to eliminate the existing jog. The possibility of making Commercial Lane a one-way street should also be studied.

Wilson Lane: Extend Wilson Lane from Lincoln Avenue to Duncan Street to provide a convenient rear loading alley for business on Main Street and North Broadway.

Parking Implementation

Implementation of the various parking and loading recommendations will require ordinance amendments, capital improvement program additions, and continued reevaluation of parking needs.

Financing New Parking Lots

Basic funding sources for new parking lots and structures are:

1. Use of City's General Fund
2. Use of redevelopment process
3. Use of in-lieu fees.

Because of the cost of parking facilities, a combination of these measures may be warranted.

Ordinance Change to Parking Standards

Reduce parking requirements where mixed land uses can more efficiently use spaces and thereby reduce total space needs.

Other Measures

1. Pursue measures to reduce parking problems in neighborhoods impacted by employee or commuter parking.
2. Continue to reassess parking problems as parking control measures are changed, new construction occurs, or new parking is available.

APPENDIX

TABLE TWO: ARTERIAL STREETS STANDARDS

STREET	R/W	LANES			BIKEWAY	MEDIAN	EXIST ADT ¹	1990 ADT. ¹
		EXIST.	1990					
BANCROFT - YGNACIO TO TREAT	110'	2	4	ON SW	16'	12,500	20,000	
	84'	2	4	ON ST.	16'	9,000	13,000	
	84'	2	2	ON ST.	--	7,400	9,000	
WALNUT AVENUE - OAK GROVE TO WIGET	84'	2	2	ON ST.	--	6,000	10,000	
	84'	2	4	ON ST.	--	10,000	15,000	
OAK GROVE - TREAT TO YGNACIO	84'	4	4	ON ST.	--	19,000	24,000	
	84'	3	3	ON ST./SW/	--	14,000	18,000	
	VARIES	3	3	PATH	--	8,000	11,000	
VALLEY VISTA TO WALNUT	VARIES	3	3	ON ST.	VARIES			
	84'	2	2	ON ST.	--	7,000	12,000	
	60'	2	2	ON ST.	--	1,000	3,---	
TICE VALLEY - OLYMPIC TO ROSSMOOR PKWY	EXIST.	4	6	ON ST.	VARIES	22,000	31,000	
		4/2	2	--	--	4,000	6,000	
ROSSMOOR PKWY. - SOUTH OF TICE VALLEY	84'	4	4	---	16'	13,300	25,000	
PARKSIDE DRIVE - MAIN TO CIVIC								
CIVIC - CALIFORNIA TO BROADWAY	EXIST.	4	4	--	--	10,000	15,000	
	EXIST.	4	4	--	--	17,000	28,000	
	EXIST.	4	4	--	--	9,000	22,000	
	EXIST.	4	4	--	--	10,000	14,000	

¹ - AVERAGE DAILY TRAFFIC

TABLE TWO (Continued)

A-2

ARTERIAL STREETS

STREET	R/W	LANES			BIKEWAY	MEDIAN	EXIST	1990	ADT ¹	ADT ¹
		EXIST.	1990	EXIST.			ADT ¹	ADT ¹		
NEWELL - I-680 TO MAIN MAIN TO BROADWAY	EXIST.	4	4	—	—	14'	19,000	24,000	15,000	19,000
	EXIST.	4	4	—	—	14'	15,000	19,000		
OLYMPIC - PLEASANT HILL ROAD/TICE VALLEY TICE VALLEY TO NEWELL NEWELL TO I-680 I-680 TO CALIFORNIA		2	4	ON ST.			10,600	13,700	20,000	16,000
		2	4	ON ST.			14,000	20,000		
		2	2 or 4 ³	ON ST.			10,000	16,000		
	EXIST.	2	4	ON ST.			13,000	17,000		
MAIN - OAK PARK TO GEARY GEARY TO I-680 I-680 TO PARKSIDE PARKSIDE TO N. CALIFORNIA N. CALIFORNIA TO CIVIC CIVIC TO MT. DIABLO MT. DIABLO TO NEWELL NEWELL TO I-680	100'	2	—	—	—	—	?	?	26,000	42,000
	100'	2	4	—	—	14'	19,000	26,000		
	100'	4	6	—	—	14'	34,000	42,000		
	100'	4	6	—	—	14'	30,000	28,000		
	100'	4	4	—	—	14'	21,000	20,000		
	EXIST.	2	2	—	—	—	12,000	12,000		
	100'	4	4	—	—	14'	18,000	22,000		
BROADWAY - NEWELL TO MT. DIABLO MT. DIABLO TO CIVIC CIVIC TO YGNACIO YGNACIO TO PINE/PARKSIDE	100'	4	6	—	—	14'	27,000	36,000	18,000	14,000
	110'	4	4	—	—	16'	8,000	12,000		
	80'	4	4	—	—	—	13,000	18,000		
	80'	2	4	—	—	—	8,000	14,000		
GEARY - PLEASANT HILL RD TO BUENA VISTA BUENA VISTA TO MAIN STREET	64'/68'	2	2/4	—	—	—	7,000	13,000	16,000	19,000
	84'	2	4	ON ST.	—	—	10,000	16,000		
	80'/84'	2	4	ON ST.	—	—	12,000	19,000		
TREAT - I-680 TO BANCROFT BANCROFT TO OAK GROVE EAST OF OAK GROVE ROAD	4	6	ON ST.	16'	36,000	50,000 ²			43,000	41,000
	4	6	ON ST.	16'	24,000	24,000				
	4	6	ON ST.	16'	23,000	23,000				

1 - AVERAGE DAILY TRAFFIC

2 - DEMAND EXPECTED TO EXCEED CAPACITY DURING PEAK PERIOD.

3 - IT IS UNCERTAIN WHETHER 4 LANES WILL BE REQUIRED TO ACCOMMODATE 1990 ADT.

TABLE TWO (Continued)

ARTERIAL STREETS

	LANES			BIKEWAY	MEDIAN	EXIST.	1990
	R/W	EXIST.	1990			ADT. ¹	ADT. ¹
PLEASANT HILL ROAD - HWY 24 TO RELIEZ VALLEY ROAD		4	6	--		16'	27,400 41,000
RELIEZ VALLEY RD TO TAYLOR BLVD		4	4/6	--		21,900	34,000
TAYLOR TO GEARY		4	4	--		8,300	12,000
LIVORNA - I-680 TO TROTTER TROTTER TO MIRANDA	84'	2	2 or 4 ³	ON ST.	--	4,000	15,000
	84'	2	2 or 4 ³	ON ST.	--	1,500	12,000
YGNACIO - I-680 TO CIVIC DRIVE CIVIC DRIVE TO WALNUT AVENUE WALNUT AVENUE TO OAK GROVE RD.	110'	4	6	ON SW.	16'	28,000	28,000
	110'	6	6	ON SW.	16'	35,000	55,000 ²
	160'	6	6	SEPARATE PATHWAY	16'	26,000	45,000 ²
EAST OF OAK GROVE ROAD	110'	4	6	--	16'	18,000	38,000
CALIFORNIA - NEWELL TO OLYMPIC OLYMPIC TO MT. DIABLO	84'	4	4	--	--	16,000	20,000
MT. DIABLO TO YGNACIO	110'	4	6	ON ST.	16'	17,000	21,000
YGNACIO TO MAIN	110'	4	6	ON ST.	16'	19,000	22,000
	110'	4	4	ON ST.	16'	13,000	17,000
MT. DIABLO BLVD. - HWY 24/CALIFORNIA CALIFORNIA/BROADWAY	100'	4	6	--	14'	22,000	31,000
	100'	4	4	ON SW	14'	18,000	24,000

¹ - AVERAGE DAILY TRAFFIC² - DEMAND EXPECTED TO EXCEED CAPACITY DURING PEAK PERIOD³ - IT IS UNCERTAIN WHETHER 4 LANES WILL BE REQUIRED TO ACCOMMODATE 1990 ADT

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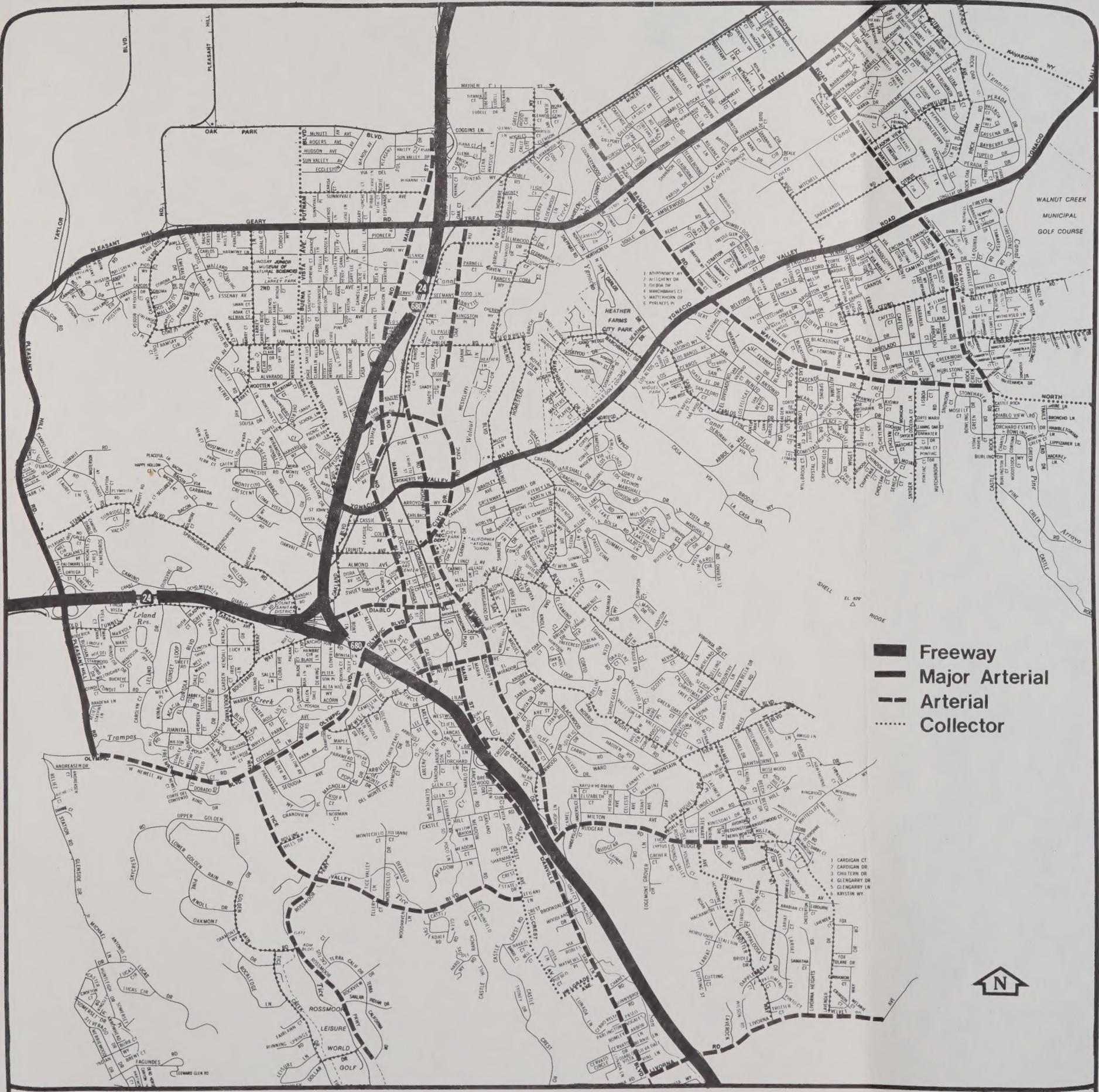
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